

ABSTRACTED

Knitted Outerwear Times



the official publication of the
national knitted outerwear association
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sweaters • swim suits • infantswear • knit fabrics • polo shirts • gloves • headwear

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Vol. 30

MONDAY, MAY 29, 1961

No. 23

Wool

Medium Grade Wool Imports Rose Sharply

Imports of medium grade apparel wools during the first three months of 1961 increased one-fourth over the 1960 volume, according to The Wool Bureau. As a result, imports of wools graded finer than 56's accounted for over four-fifths of the 1961 imports as compared with less than three-fourths for the corresponding period last year. Imports of all grades of apparel wool during the first quarter dropped 10 per cent from a year ago, reflecting the recession in mill consumption of wool which reached a low point in December, 1960.

A statistical comparison covering apparel wool imports for the months of January-March 1960 and 1961 just released by the Bureau shows that the combined market share of wools from Argentina and Uruguay rose from over one-fifth of the 1960 total to under one-third of the 1961 total. An offsetting decline occurred in the combined market share of imports from Australia, New Zealand and the Union of South Africa. Nevertheless, the Bureau stated, these countries maintained their dominance in this import market with two-thirds of the total.

The reason for this shift, the Bureau explained, is that the South American countries started the season with a huge carry-over from their previous season's clips. In order to dispose of this carry-over, in addition to their current clips, the Argentine and Uruguayan governments modified their export

taxes and export exchange rates to bring their wool prices in line with world wool values. The bulk of their exportable supplies having been sold, U. S. demand for foreign apparel wools is likely to shift to Australia, New Zealand and the Union of South Africa for the remainder of this season.

A shift in the sources of duty-free carpet wool imports was also reported in the Bureau's quarterly report. New Zealand's share of total imports increased from 18 per cent of the 1960 first quarter total to 23 per cent of the corresponding 1961 total. Since New Zealand achieved an equal market status with Argentina in annual 1960 U. S. imports of carpet wools, the Bureau said, it is probable that the first quarter gains registered by New Zealand will expand as its wool selling season reaches a climax and even give New Zealand a slight edge over South America for the entire year of 1961.

Sales Promotion

N. J. And N. Y. To Pick 1961 Sweater Queen

The New Jersey Sweater Queen will be selected June 28 at Palisades Amusement Park and the New York Queen will be selected July 10 at Rockaways' Playland, it was announced by the National Knitted Outerwear Foundation, sponsors of the annual contests.

The competition is open to girls from 17 to 24 and the only qualification, the Foundation said, is "looking better in a sweater." The winners will receive U. S. Savings Bonds and sweaters.

The Foundation also is promoting National Sweater Week

September 18-24. It is calling upon merchants and manufacturers to tie in their advertising with the event.

The National Knitted Outerwear Association has arranged with Pitney-Bowes, Inc., manufacturers of postage meter machines, to announce Sweater Week on its postmark.

Design DM, at nine dollars, bears the legend, "National Sweater Week" and the dates. Design R, at \$12, has the same message plus a sketch of a sweater with the words, "Look Better in a Sweater." Both postmark ad plates are available to meter machine users from Pitney-Bowes, Inc., Stamford, Conn.

Trade Education

Philadelphia College Offers Pattern Course

PHILADELPHIA, Pa. — A ten-day course in pattern wheel design and analysis will be given at 9 a.m.-5 p.m., June 12-16 and 19-23 at the Philadelphia College of Textiles and Science. Professor Thomas Edman will be the instructor.

The course will cover the principles of stitch formations, knitted fabric analysis and the versatility of pattern wheel machines. Each student will be required to develop original pattern wheel designs from the sketch to the pattern wheel set out.

Enrollment will be limited to 25. The tuition is \$75.

NKOA's 1962 Banquet On May 3 At Waldorf

The 44th annual banquet of the National Knitted Outerwear Association will be held Thursday, May 3, 1962, at the Waldorf-Astoria.

Trade Shows

Expect '63 KAE To Top Record Show This Year

The sponsors of last month's 45th biennial Knitting Arts Exhibition said it "introduced the greatest array of new scientific and technological developments ever presented by a single exposition to the world knitting trade."

Sidney S. Korzenik, executive director and counsel, National Knitted Outerwear Association; William F. Williamson, president, National Association of Hosiery Manufacturers, and Robert D. McCabe, managing director, the Underwear Institute, said these new developments foreshadow a period of rapid growth for the knitting industry in the coming years.

The associations added that plans are now underway to make more space available for the next KAE, which will be held April 29-May 3, 1963 in Convention Hall, Atlantic City. They declared that space requests already received are the largest number ever received at such an early date.

Robert T. Kenworthy, president of Robert T. Kenworthy, Inc., the exposition manager, said, "More than 25 per cent of the firms which participated at the 1961 KAE have thus far returned their space applications for 1963. We are therefore considering utilizing a portion of the lower floor of the Hall to accommodate the heavy demand for display booths."

Although the tally has not yet been completed, it is estimated that the year's show attracted close to 15,000 visitors.



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Knitted Outerwear Times

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Finishing

New DuPont Co. Chemical Retards Pilling

By CHARLES REICHMAN, Editor

A VERSATILE chemical with potential end-uses cutting across many different, unrelated industries, was announced recently by the Industrial and Biochemicals Department of the DuPont Company. Called Baymal, the new product is a colloidal alumina, said to have a number of indicated uses in the textile field including the knitwear industry. In the latter area, according to DuPont, Baymal's most promising opportunity is as a low concentration size or finish to retard the pilling propensity of sweaters and other knitwear products of Orlon, other acrylic fibers and of natural fibers, including wool and cashmere.

In knitwear, Baymal can also be used, according to DuPont, to curb the inherent stretchiness of knitted fabrics. Other possible uses for the product in the knitwear field include the following:

- Soil and stain retardant.
- Static control agent.
- Flame retardant.
- Hand modifier.
- Wool shrinkage inhibitor.

Wear tests of interlock Orlon sweaters knitted of spun Orlon and treated with 0.1 to 0.5 per cent of Baymal reportedly have reduced the garments' rate of pilling at least 50 per cent. No claims, however, are made that the new colloidal alumina will completely prevent or eliminate pilling in a knitted product of Orlon or other synthetic fiber. However, it is stated that Orlon sweaters possessing a high propensity toward pilling, when treated with Baymal, would be upgraded in pilling resistance to that of a better quality Orlon knit.

Whether or not Baymal is applied to Orlon and other acrylic fiber sweaters for control of pilling, it must be recognized that in the final analysis the development of pills or balls of fiber on such garments is directly related, in addition to fiber composition, to such factors as:

- System on which the yarn has been spun. Yarns processed on the short fiber systems generally tend to pill more than those spun on long staple systems.
- Ply of the yarn. Singles yarn would obviously exhibit a greater propensity to pilling than yarns that have been plied.
- Yarn twist. The more turns per inch in a yarn bundle, the

less would be its degree of pilling.

- Knitting quality. The more tightly knitted a fabric, the less chance is there for fiber movement. Thus, the tendency of such cloth to resist development of pills would naturally be superior to a fabric where there are fewer courses and wales per square inch of the fabric structure.

Fiber Frictionizer

Baymal's capacity as a pilling retardant stems from its ability to prevent fiber movement. This fiber frictionizing property is also associated with the alumina's ability to prevent permanent stretch of knit goods made from acrylic fiber yarns. Sweaters treated with two per cent Baymal on its surface, for example, not only have a fuller body than an untreated garment but resist stretching more readily than a sweater not treated with the finish.

Baymal's protection against soiling is limited largely to dry soil. Its stain resistance is said to be of a moderate degree and not in the class of specific stain resistant finishes. The anti-felting properties imparted to wool by Baymal are associated with two factors; namely, the chemical's sharp reaction to proteins and its frictionizing ability.

Wash With Detergent

Although the finish is not removed by washing, it becomes deactivated in a soap solution. It is necessary, therefore, that sweaters treated with Baymal be washed with detergents only. Baymal is not dissipated during knitting or the yarn processing operations, if it is applied in the yarn or fiber state.

Baymal can be applied in knitting mills or by commission dyers either after piece dyeing or in the course of wet finishing, if knitting is done from yarns dyed via either the skein, package or tow or stock routes. In any case, the finish solution must

be de-anionized to precipitate sulfates or other polyvalent anions. Cations or monovalent anions, such as chloride, do not affect the chemical.

In treating both piece dyed or ingrain dyed knitwear with Baymal, 0.1 to 0.5 per cent of the alumina based on the weight of the goods is added to the stable bath, the pH of which should be adjusted to pH 4 to 5 with acetic acid.

Procedure Outlined

The operation should be carried out in a conventional sweater washer at a temperature of 130° F. The wash bath should be run for about 15 minutes if the operation follows piece dyeing; five minutes if it's part of the wet finishing sequence.

After the bath is dropped, piece-dyed or ingrain-dyed garments may be treated with a cationic softener. Application of softener on piece-dye goods is done in a 20-minute operation; on previously dyed sweaters the softening cycle is only of five minutes duration. Following application of cationic softener, the goods in each case are extracted and dried in the normal manner for piece and ingrain-dyed knitwear.

Baymal comes as a white, free flowing, water dispersible powder. After application, it dries in the form of a film, which does not break down under high temperatures. The toxicity of Baymal is quite low; in fact, it can be used in cosmetics and pharmaceuticals.

Alon C Finish

A product somewhat akin to Baymal has also recently come on the market. Called Alon C, this product, although also an alumina, is chemically different from Baymal in that it does not form a film. A recent DuPont textile fibers technical service bulletin recommended use of Alon C as a scrooping agent on fabrics made of filament yarns. Generally, it is claimed that Alon C produces a more bitey hand than Baymal. It is thus seen as a possible better finish for men's sweaters than women's knits, which generally require a softer, more delicate hand.

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KAE Knitting Equipment Developments

Three New Tricot, One Raschel Machine Introduced

By A. REISFELD
Director, Research and Development
Gehring Textiles, Inc.

THE Knitting Arts Exhibition which traditionally is of considerable interest to the warp knitting industry was this year somewhat disappointing to Raschel knitters, but quite exciting to tricotmen. Only one conventional Raschel unit was exhibited as against three novel tricot units, two warpers and various ancillary equipment.

Tricot Machines

Reiner exhibited the improved 170 inch wide Excentra 2- and 3-bar units built by Liba Co. The superstructure was "clean" and obviously designed for optimum accessibility. Location of take-up rolls and angle of the guide bars was arranged to facilitate thread manipulation. This is a very important detail from the standpoint of operating and thread replacement which can become a time consuming procedure in case of poor access to the guides.

The Excentra has all controls grouped neatly on a "dash-board" mounted in front of the pattern mechanism. Controls include tachometer, rack clock, three shift rack counter, quality and runner adjustment wheels, oil level indicator and guide bar spring release lever.

Controls for the let-off are situated just above the dash which enables making all the adjustments from one point without the need to walk around the machines or climb its superstructure.

The 2-bar machine ran 40 denier nylon jersey at 900 courses per minute. The yarn, unthrown, was put up on 30 inch diameter 42 inch long beams. The runners were 63 inches on top and 47 inches on the bottom, the quality—eight inches.

Reiner would impress knitters more had the machine been put through its paces at currently prevailing qualities in the industry which are well in excess of eight inches. The Excentra, however, according to reports, is capable of knitting at 26 inch quality on 55 denier acetate to satisfy the unending quest for higher and higher yields (and more abominable fabric).

The 3-bar machine ran a 15 denier fancy tuck at 600 courses per minute. It did so apparently without any strain, judging by the absence of noise

and vibration. The yarn was supplied on 21 inch diameter spools.

The pattern chain featured small nylon links mounted in between the regular chain and supported by the same connecting pins. These links are used to stop the let-off motion and so produce the tuck effect. They are included on the chain only in the section responsible for development of tucks.

The links are of uniform height and do not require an individual chain drum. This greatly simplifies the procedure of chain building. The nylon chain actuates micro switches connected to the circuit of the clutch mechanism. Closing of a micro switch sends an electric signal to the clutch via two sliprings to disconnect the power drive to the beams and arrest their rotation.

The most interesting features of the Excentra models are:

1. Knitting element drive—The movement for all knitting element bars is developed from a system of eccentrics coaxially mounted on a single drive shaft. The harmonic motion generated by the eccentrics is suitably modified through levers and linkage arrangement to produce the requisite movement for needles, sinkers, guides and presser. The entire eccentric assembly is pressure lubricated and enclosed in an oil sump.

2. Let-off motion—The let-off is power driven and based on constant yarn speed. It is governed by a differential operating a variable speed drive coupled to beam shaft. The yarn speed is signalled to the differential from two felt-covered rollers in contact with the beam.

The differential compares the preset runners in terms of yarn speed with the value signalled to it, via a chain and sprocket, by the felt rollers. Should there be any variance, the differential takes corrective action by actuating the variable speed drive until the yarn velocity is restored to the preset value. Runners up to 300 inches are claimed to be available.

3. Guide bar assembly—The guide bars are suspended from a number of "T" shaped hangers. Extremities of the bars are provided with additional hangers to prevent whipping or buckling at high speeds. The bars slide in ball bearings with very little frictional resistance.

4. Pattern mechanism—The pattern mechanism is of conventional design. The links or wheel act upon a short slide piece mounted in guide tracks. The slide transmits the shog movement to the guide bars via long pushrods. Since the wheel or links work actually between the guide tracks, there is no tendency to bend and jam the slide piece, a condition experienced on other constructions. Of interest is the method of keeping the guide bars in contact with the slide piece and wheel or links. This is accomplished by springs loaded in compression and acting on the bars through short rods. The entire spring assembly is mounted on a yoke on the guide bar shaft and oscillates with it as to eliminate any torsional strain normally associated with fixed spring. In case of spring failure there is always enough pulling power to control the guide bar. Ordinarily, a broken spring has a disastrous effect on knitting elements and warp.

5. Take-up motion—Fabric is taken up by two large diameter rolls centrally supported to reduce vibration. This is quite an effective arrangement since the rolls were stable despite high speed. The rolls are spring

loaded to eliminate slippage of fabric. The spring pressure is adjustable. The cloth roller is driven by friction and can accommodate substantial amount of cloth. Quality is regulated by setting a variable speed drive turning the take up rollers. A pair of selvage spreaders is provided. They consist of pinned belts wrapped around the take up rolls and driven by them. Up to 40 inch quality may be obtained which is more than ample.

Mayer had on display a brand new 2-bar Super Rapid model. It features an eccentric drive to the knitting elements, similar in principle to the one used on Excentra but different in the linkage and lever details.

The machine, 168 inches wide, ran 40 denier unthrown Dacron jersey at 900 courses per minute. The runners were: top—64 inches, bottom—49 inches and quality 10 inch. The yarn came on 30 inch diameter, 42 inch long spools. Knitting of unthrown, fine denier Dacron at such high speeds is no small accomplishment since it is customary to throw this material prior to knitting on account of the filamentation problem.

The superstructure of the machine appeared similar to that of the previous Super Rapid. The front guide bar has been provided with a stabilizing rod running the entire length of the bar and fixed to the hanger brackets. The guide bar rails were partially hollowed out for weight reduction and enhanced rigidity. The tension bars are suspended from a large number of soft cantilever springs to render the assembly more responsive to rapid tension fluctuations. The warp sheet path was short and without sharp angles.

The pattern mechanism has been streamlined, particularly in regard to its drive. Timing of shog movement may now be changed at the universal joint drive without the need to disturb the chain drum or wheels.

The take-up mechanism consists of two large diameter rolls and a superimposed pinch roll designed to prevent fabric slippage. The quality is adjusted

(Continued on Page 34)

This is the concluding article in the four-part series discussing new knitting equipment developments displayed at the Knitting Arts Exhibition, April 24-28, in Atlantic City, N. J. Previous articles covered circular sweater-strip machines, sinker top and rib tubular yardgoods units, V-bed flat equipment and full-fashioned spring needle frames.

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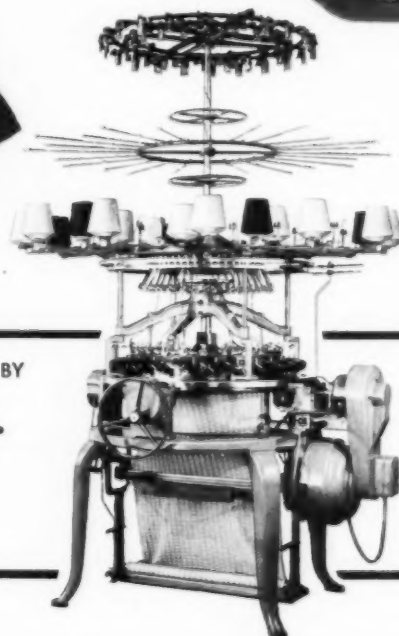
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Model

Foreign Knitting Equipment Developments

East German Flats and Circulars Shown at Leipzig Fair

WEST GERMANY — As in previous years, the East German Leipzig Fair included a section devoted to the display of a number of new East German knitting machines. While some of these machines, particularly in the circular rib machine field, tend to show that the large nationalized combines which produce this equipment have progressed little beyond the circular machines which were in view in previous years, other machines represent undoubtedly new ventures and very successful ones at that.

The Model 5602/8 open top circular machine built by the VEB combine in Karl Marxstadt, is a multi-feed machine specifically designed for knitting d-in fabrics.

The machine is available with cylinder diameter of 26 inches and 48 feeds. At the moment the model is being built only in the gauge — 18 needles per inch, corresponding roughly to a 26 fein Terrot machine.

The cam race consists of 16 cam sections and each section is equipped to deal with three yarns; that is, a backing yarn, a face yarn and a laying-in yarn. The machine is thus able to knit fleecy fabric structure. The laying-in feed is of the twin type, so that it is possible to feed a second laying-in yarn to the needles without having to fit a further attachment.

The laying-in of two yarns at the same feed section can be done both when knitting ordinary laid-in fabric or when knitting fleecy fabric.

With 48 feeds, it is to be

expected, that the fabric output is of a corresponding magnitude. The machine is thus able to knit about eight Kg. of fleecy fabric per hour with a fabric tube width which varies between 75 cm and 95 cm.

The fabric is rolled up and the size of the fabric roll is controlled by an electrically-operated scanner which works on the feeler principle. After removing a guard plate, the feeler also can be removed, and the machine cannot be restarted until the guard plate has been replaced.

The yarn feed wheels are of the spur gear type and move at variable speeds, depending on whether they feed the face yarn, the backing yarn or the laying-in yarn. At the same time the feed wheels are also equipped with a five-step variable drive which is centrally adjustable. There are also equalization attachments for the yarn tensions.

The VEB combine recommends the following yarn counts for use on this machine. A 20 Tex count for the backing yarn and for the face yarn and a 72 Tex count for the laying-in yarn.

When knitting fleecy fabric, the machine has an output of nearly 20 running meters per hour. The latch-needles are of three types. High butt and low butt needles as well as long and short needles so that by means of suitable needle set-outs all sorts of variations in the field of laid-in fabrics can be produced.

Holding down sinkers make the machine self starting in the event of press offs. A built-in spirit level ensures an absolutely straight level erection of the machine and the stitch length can be adjusted either at individual cam sections or centrally. The bobbin stand can accommodate 64 yarn packages weighing four pounds each. The machine is well equipped with stop motions positioned at various strategic positions, so that the machine is set still instantaneously in the event of yarn breakages,

knots in the yarn or yarn drak. The electrical installation includes illumination of the inside of the fabric tube. In order to enable the operator to inspect the inside of the fabric tube closely, the inspection lamp over the center of the cylinder works in conjunction with a moveable mirror. The machine can be moved at inching speed by means of a press button control, while the stop motions work in combination with colored signal lights in order to enable the operator to locate at once the cause of the stoppage.

The individual electric drive is effected by means of a variable slip ring squirrel cage motor with double relays and a safety device which prevents the motor from being started accidentally after the stop motion has stopped the machine.

The flat bar machine NUWUB built and marketed by the same combine, has also been brought up to date to a considerable degree, so that the NUWUB 5403 on display at Leipzig proved to be a considerable advance over the NUWUB model exhibited there in previous years. The 5403 model is a fully automatic twin carriage power flat bar machine with stitch-transfer attachment and a considerable pattern scope. The machine has a knitting wide of 160 cm and is available in the following gauges: five needles per inch, seven needles per inch and 10 and 12 needles per inch. The needlebeds have been made from a special heavy duty steel.

The model has a stitch transfer attachment and considerable pattern scope. High and low butt needles are used and short plate needles with a spring expander at their sides are used for the stitch transfer. Special needle jacks increase the pattern possibilities still further.

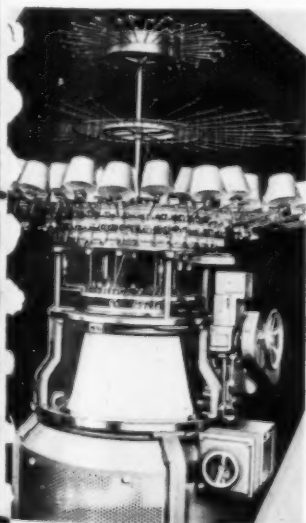
The back needlebed can be racked automatically backwards and forward after each traverse of the cam carriage or if needed after each two traverses of the cam carriage. The total needlebed rack extends over six needles but it is possible to rack the bed in three stages over two needles at each stage.

The twin system carriage is equipped with cardigan cams for tucking in the hook and there are special pattern cams which act on the pattern jacks.

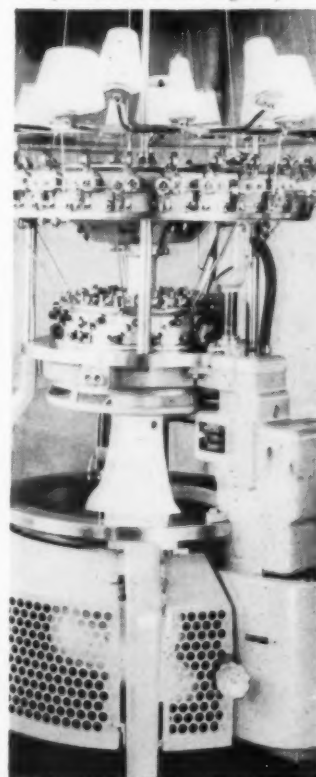
The pattern cams are arranged in the carriage cam plate below the normal needle cams. The stitch length is automatically controlled through the normal arrangement of stitch length slides which have the different position and there is a micrometer adjustment for setting the cams in the back bed to very fine limits.

The six yarn carriers are arranged in pairs and run on prismatic rails. Yarn carrier changes can be effected after each traverse of the carriage. Carrier changes are effected without these having to hit yarn carrier stops and the positioning to the rear of the carrier rails permits easy accessibility to the needle beds.

The stitch transfer mechanism enables stitches to be transferred from the front bed to the back (Continued on Page 9)



Model 5602/8 sinker top machine



Model 5606/2 interlock yardgoods machine

This is the NEW Paris Finisher

First shown at Knitted Arts Exhibit
Atlantic City, N. J., April 1961

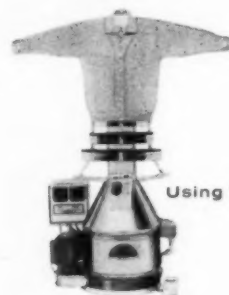
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BURKEY UNDERWEAR CO., INC.	Hamburg, Pa.	REVERE KNITTING MILLS, INC.	Wakefield, Mass.	ROSE KNITTING MILLS, LTD.	Montreal
GLASGO LIMITED	Lansdale, Pa.	ROOSEVELT MILLS, INC.	Rockville, Conn.	ROYAL KNITTING MILLS	Toronto
HUNTINGDON MILLS (SOOWAL)	Philadelphia	WILSHIRE KNITTING MILLS, INC.	Philadelphia	NATIONAL KNITTING MILLS CO., LTD.	Toronto
				ROBERT PRINGLE & CO., LTD.	Scotland
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GARMENT FINISHING EQUIPMENT CORP.

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bed and vice versa. The cams necessary for this work are incorporated into the main cam system in the cam carriage. During the stitch transfer operation, the front bed is racked half a needle space from its basic position.

The high bow carriage moves along two heavy guide rails upon eight roller bearings and the arrangement is such as to ensure a free field of vision of both cam plates in the carriage.

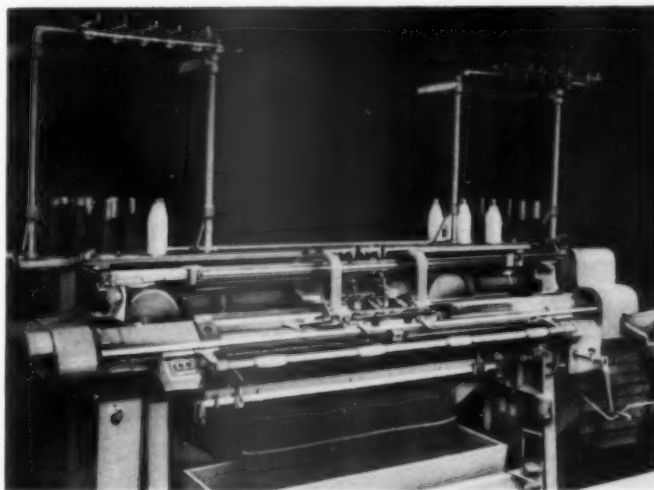
The paste board card mechanism controls 77 different functions in the machine. The cards can be racked forward or backward over one or two paste board cards. By means of an economizer which operates in conjunction with the paste board card mechanism, a change from one garment length to another can be effected quickly without having to alter the punching of the paste board cards. The economizer works by means of small steel balls and the length of the garment can be altered by adding or taking out these steel balls. Each small ball corresponds with one pattern repeat.

The fabric take-up uses a main roller which is covered with fluted rubber and a battery of counter pressure rollers which can be adjusted individually to suit all conditions. These counter pressure rollers can be swung out of action collectively by means of a handle, when this is required.

The machine can be stopped automatically either by punching an appropriate hole into the paste board card or through the electric stop motions which act in the event of yarn breakages, knots in the yarn, empty bobbins and needle load-ups.

By means of an additional attachment, it is possible to knit widened sleeves on this machine. The device does not permit the knitting of a truly full-fashioned article. After knitting the 2 x 2 rib cuff, the fabric is widened in three steps by pushing certain groups of needles into action. When the widest part of the sleeve has been reached, a group of needles on either side of the garment part can then be pressed off. When using the full knitting width of the machine, two or three sleeves can be knitted simultaneously.

The machine is driven individually by means of a three



Model 5403 V-bed flat machine

speed squirrel cage motor via a V belt drive and a heavy adjustable driving chain. Very large chain sprocket wheels produce a quiet and even movement of the heavy carriage, which can knit up to 48 courses per minute.

A simplified version of the above machine, which was also on view at Leipzig, is the twin system power flat bar machine 5405/1. This fully automatic machine has been designed with an eye on simplicity of construction coupled with high productivity.

The machine has a knitting width of 160 cm. and is available in a wide range of gauges, starting at five needles per inch and finishing at 14 n.p.i. The specially designed plate needles are of a type which prevents oil seeping onto the fabric and

have high and low butts. The cams in both systems are equipped for tucking in the hook.

In the event of difficulties being encountered during knitting, both front bed and back bed cam plates can be easily lifted out of the carriage. The back bed is equipped with a six needle rack which can be used either for single needle racking or for two needle racks at three stage intervals. Needle bed racking can be effected either after each carriage traverse or after each two carriage traverses. The front needle bed can be let down for inspection purposes.

There are six yarn carriers, which can be changed in any desired sequence at each carriage traverse. The twelve yarn tensions work in conjunction with the electromagnetic stop motions

which act in the event of yarn breakages, knots in the yarn, yarn drag and empty bobbin.

The short carriage uses a single strong high bow and allows for maximum accessibility to all parts of the cam carriage. The stitch-length can be adjusted automatically over four different positions by means of stitch cam slides which are fitted with slide brakes to prevent misadjustments.

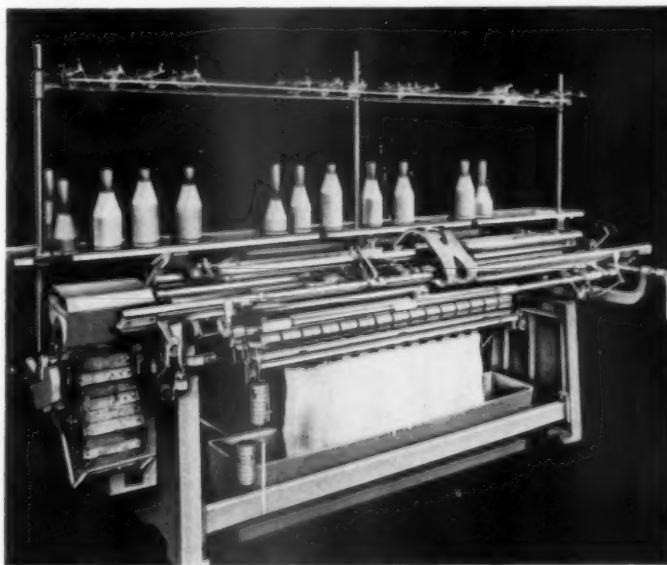
A paste board card mechanism supervises 47 different functions. The prism carrying the cards can be racked forwards and backwards over one or two cards as required. An economizer which again operates by the insertion of small steel balls can cause a lengthening or shortening of the knitted garment part without having to alter the paste board card arrangement. Each steel ball represents one pattern repeat. The pattern potentialities include the usual range for this type of machine—raised and ripple effects, tuck stitch and float stitch effects and racked rib effects.

A feeler attachment on the cam carriage causes the machine to stop at once in the event of fabric press-offs or load-ups on the needles. A knitting speed of over 50 courses per minute is claimed for this model. The machine can be stopped either through punching a hole into the paste board or manually by means of a rod which runs the whole length of the machine. In addition to this there are of course the above mentioned stop motions.

A new East German interlock machine for underwear and outerwear knitting made its debut at Leipzig this year. The model 5606/2 is available in various cuts and cylinder diameters as well as a varying number of feeds. The most productive machine in this range has a cylinder diameter of 30 inch and 48 feeds. The gauge of this machine is 20 needles per inch. The machine speed is infinitely variable and ranges from 5.5 rpm to 25 rpm.

The plate needles used in this machine are of a new type and the dial needles have high and low butts for the production of vertically striped tuck stitch designs.

(Continued on Page 33)



Model 5405/1 power flat machine



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Every cone of your order for Fallspun quality yarn is shipped *custom-wrapped* . . . and for good reason. It comes to you from a company with over a half-century's experience . . . proudly produced by skilled craftsmen . . . approved and passed through every step of yarn manufacture. Even the wrapping tells you: whatever your needs, Fallspun is your best yarn investment.

FALLSPUN YARNS are produced from all fibers and combinations of fibers including Vicuna, Guanaco, Alpaca, Cashmere, Angora, Mohair and all the fur fibers, wool and synthetics of every type and description.



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Mill Modernization

Emple Knitting Mills Occupies New Streamlined Plant

BANGOR, Me.—With the increase of novelty and styling in men's knitwear, Emple Knitting Mills' role in the industry since 1956 is that of a manufacturer's manufacturer. Set off in a corner of the country where space is no problem, the company laid plans last summer to make the most of this asset and started to build a one-story plant with 60,000 square feet of floor space on a 58-acre lot along a main highway. Last December, the firm moved out of its five-story factory in town to its new modernistic quarters in Brewer, a small community across the river.

The move gave the company from 60 to 80 per cent more floor space, but more important it gave plant production personnel a once-in-a-lifetime opportunity to work out cost-cutting, time-saving arrangements in an area 300 feet long and 200 feet wide, all on one level and uncluttered by uprights. Once the location of a department is definitely decided, studies are made as to the material handling methods most suitable, and servicing equipment is designed by the firm's own engineers. Established only a few weeks, operation in some departments is still in the fluid stage. Special mechanism is now on the drawing boards for the cutting department and the eventual conveyor system for the sewing area has not yet been decided, but a number of ingenious ideas are already in operation.

Due to the nature of the firm's operation, only a relatively small

area was required for the main office and executive suite. These are located at one front corner of the huge building, spacious, well-lighted, with tiled floors and draped windows, furnished with modern equipment.

Adjacent to two truck ramps, the receiving room and humidified storage area is located at this end of the building. The company takes in about one-half million pounds of pre-dyed yarn a year, and the storage area can accommodate four weeks' supply spread out so lots can be readily identified.

A section of open steel racks, used to serve yarn to the machines, separates the storage room from the knitting department, where there are now 100 knitting machines in operation. Most of these are three to six cut circular Leightons, but there are also a number of six cut Wildman Jacquards. Flat beds and a new Stolle are used for producing trims. The 1,000-foot gravity conveyor system that winds through the plant begins near the stock racks and courses down the center of the knitting department to centrally located scales.



One thousand foot conveyor system starts at the yarn stock room. Signals in background indicate machines wanting new supplies.

To keep each machine in uninterrupted production, a position in the racks is assigned to each machine and complete orders of one size are set up as fast as they are received and stacked in readiness for the moment when the allotted machine is free. Each machine has a number, and when one lot is completed the number is posted on large hang cards, signaling the stockmen that the machine is open for new assignments and yarn supplies.

The laundering department, with five Huebsch washers, sin-

gle and double extractors, and Tube-Tex equipment for folding, is set at one side of the plant between the knitting department and the pre-cut storage shelves, and production of yardage from the knitting machines flows from mid-plant to this area.

Inspection of yardage, mending, separation of transfers and brushing operations are executed in the center of the building and shuttle counter to the general flow of material. For visual inspection, the mill uses

(Continued on Page 13)



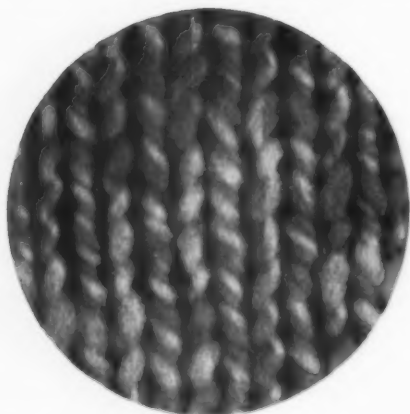
Part of sewing department showing wall of tote boxes with pre-sewed stock in background.



Power lines are sheathed and outlets are conveniently located to eliminate maze of overhead wiring in sewing department.

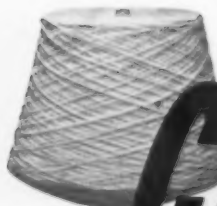
IF WE COULD
SHOW YOU THIS
SWEATER IN

3D



...You'd see what
CARON SLUB YARNS
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It's something you have to *see to believe* — this exciting new sweater texture that comes from using CARON'S SLUB YARNS. For truly, here is a new type of yarn with a built-in diameter variance at regular or random intervals, yielding a special stitch distortion unlike anything known in American yarns! It's one of Caron's hottest "new things for the new look in sweaters" . . . an innovation straight from the fashion capitol of Europe. New CARON SLUB YARNS — available to you now in worsteds or synthetics, in solid hues, multicolors or even marls . . . as you prefer.



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Inspection assembly automatically rolls and folds. Designed by plant production engineers, apparatus is made of multi-purpose girders.



Cutting tables at terminal end of production line which goes back on other side of 300-foot building.

mechanized tables of its own creation. Constructed of multi-purpose girders of light gauge steel, also used for work benches and dollies throughout the plant, a one-half horse motor powers the roller which carries yardage over the table surface and simultaneously operates a platform carriage so inspected material is evenly folded by a shuttle action.

The pre-cut storage shelving extending from the laundering area lengthwise down the plant to the cutting tables at the opposite end of the plant from the yarn stock racks, are also fabricated with light-weight girders. These are perforated with holes to accommodate screws, so they may be cut to any length and erections can be readily assembled and disassembled. The pre-cut storage shelves have a capacity of about 45 days production.

Lot assembly and bundling is done in the cutting room where work is checked against wash date entries in a control book before it is stacked in tote boxes racked about the walls of the sewing department. To avoid a tangle of overhead wiring, 125 sewing machines are powered by lines sheathed in tubing with plug-in outlets at convenient intervals so that rearrangement can be easily accomplished.

Material stock rooms serving each department are set against the walls so that supplies for all sections can be replenished by

stock personnel simply skirting about the perimeter of the plant without congesting operational areas. The fully equipped maintenance shop is centrally located in a caged area, immediately adjacent to the knitting department.

One of the impressive features of the new building is the comparative ease with which the entire plant layout could be rearranged. This is an essential consideration to the type of operation carried on by the Emple Knitting Mills in which novelty styling is life blood and maximum efficiency, a stock in trade.

Emple Knitting Mills made shaker sweaters and hockey caps, and sold them directly to

the trade, first in Maine and then throughout New England for years after the firm was established in April, 1927, by Samuel Emple, who started in the knitting business in 1910, and his son, Joseph Emple, now the treasurer of the company.

Later a line of baby shakers was added, the company took on a few jobbing accounts and growth was steady throughout the depression and war years. The number of workers has increased from a handful to 300-350 employed at seasonal peaks. Expansion has progressed from the original 3,000 square foot factory to its present magnitude. New personnel have joined the firm; Samuel Rolsky is now the

president, and ten years ago Karl W. Nass, who has been a production specialist both in this country and in Venezuela, became vice president and general manager.

Six years ago, with the increasing demand for novelty in fabric and styling for men's knits placing a heavier burden on manufacturers of these lines, the firm cut loose from all dealings directly with the trade and concentrated on becoming an auxiliary manufacturer for other manufacturers, many of whom are producers of prominent, nationally known brand lines.

With no distributing set-up of its own, the Emple Mills make up from two to twelve samples of about 250 different styles and fabrics of its own design. These are offered exclusively to manufacturers who wish to add any of them to their own. In full production, as many as 70 styles may be in process with an output of 1,800 dozen per week. The major difference in this type of operation is in the calendar timing.

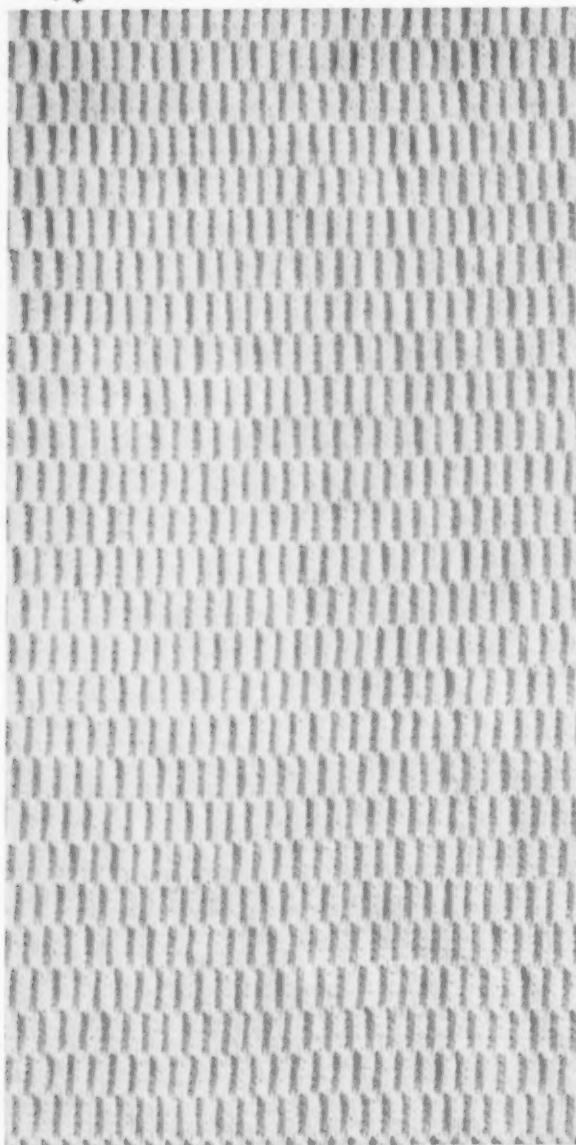
Howard Honig, vice president and sales manager, must plan his styling two years ahead instead of one. Early in 1961, fabrics to be offered for fall 1962 are designed and made up. Styling started earlier this year, but by July 1 this phase is in process, also for the 1962 season. From August to December, when final decisions must be made, sample production is in full swing. There is no merchant

(Continued on Page 26)



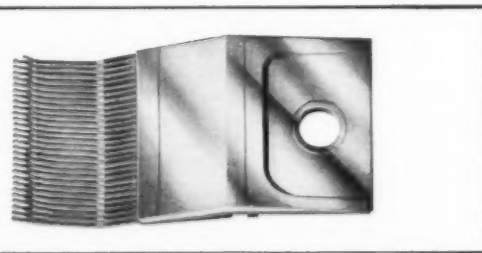
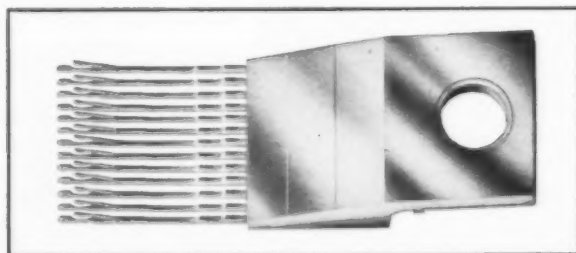
Pre-cut storage shelves, made of perforated girders are easy to adjust, dismantle or assemble, accommodate 45 days' production. Wash dates are logged for cutting room check-out control book as yardage goes into racks.

UNITED ELASTIC KNITS WITH TORRINGTON NEEDLES



United Elastic Knits with Torrington Needles. This advertisement features a large, detailed image of a knitted fabric sample on the left, showing a dense, textured pattern. To the right of the fabric image is a large block of text, which appears to be a repeating pattern of the same text, likely a placeholder or a result of a scanning error. The text is too small and repetitive to be legible.

FOR WARM COMFORT & FOR LUXURIOUS EASE
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There's a Torrington Needle for every type of knitting machine and every type of knitting

*Trade-mark of United Elastic Corporation.

THE TORRINGTON COMPANY

Torrington, Conn., U.S.A. • Bedford, P.Q., Canada • Coventry, England • Genoa, Italy
TORRINGTON MEETS EVERY NEEDLE NEED: SEWING • KNITTING • TUFTING • FELTING

Equipment Developments

Textile Institute Group Surveys Knitting Problems

BUXTON, England—Warp knitted fabric faults, the Macqueen Tailor-knitting technique, work study in the knitting room, and studies of the knitted loop were the subjects of papers given at the most recent meeting of the Knitting Group of the Textile Institute, held here in Buxton yesterday.

Warp Knitting

Two technologists formerly from British Rayon Research Association and now working with the newly formed Cotton, Silk and Man-Made Fibers Research Association, presented the results of recent work on problems in warp knitting. Introducing their paper, W. T. Cowhig said machine manufacturers compete with each other in increasing machine speeds and figures up to 1500 courses per minute are being talked about. These speeds can be obtained, he said, but they sometimes bear the same relation to actual commercial speeds as do a car manufacturer's claims to the normal cruising speed of the average motorist who uses his car. Nevertheless there is a general trend to higher speed. What was abnormal yesterday may be a matter of course tomorrow, said Mr. Cowhig.

Warp knitting beams have grown in diameter and a good deal of design and experiment has gone into making the robust beams which are today available to withstand the tremendous relaxation pressures which can be exerted by nylon. Photoelectric hole detectors—stop motions—are used far more widely in the U.S.A., said Mr. Cowhig, than they are in Britain, where they are still being introduced on a trial basis. There are many who still believe drop wires are the best solution and that stop motions cannot be justified on economic grounds.

Very few 168 inch machines are still being used in Britain, again contrasting strangely with the U.S.A. Part of the reason for this, he said, is concerned with the availability of finishing equipment for handling this width.

Today nylon is the dominant material. Only a few years ago it seemed impossible to knit low twist yarn at high efficiency,

but today little trouble is met with in obtaining good fabric with a low fault rate.

Loop raised nylon has greatly widened the scope of nylon by increasing its handle and warmth benefits in the garment field.

The field for warp knitting is hardly tapped in many directions: spun yarn, carpets, and so on. Yet the amount of fundamental research available in Britain is pitifully small, he said.

Stop lines were chosen when warp knitting research was first begun at the now merged British Rayon Research Association because it concerned the trade a great deal. To find out what caused stop lines would involve learning a great deal about the details of the knitting process, the way in which loops are formed, and so on.

Some warp knitters said the stop lines were more dense, others said different things. By detailed measurement under microscopes it was found that the structure of a stop line varied considerably from a thick and thin place for a fairly rigid structure like shark-skin to one with doubled thick lines for locknit and reverse locknit. It was concluded that stop line structures varied greatly according to circumstances and that measuring stop line construction with a microscope is too lengthy a method. Other methods had to be found to assess the intensity of a stop line.

Thus an instrument was designed based on a pair of germanium photo cells with the sensitive area 60 thousand x 4 thousand. This could be set up so that as the stop line passed the instrument, one cell locked at the disturbed area of the stop line and the other at the more regular fabric $\frac{3}{4}$ inch away. Hundreds of stop lines were judged with this instrument.

"We could only carry out our

experiments on one type of machine, a two bar F.N.F. unit," Mr. Cowhig said, but it seemed likely that all warp knitting machines would possess one feature in common: a certain amount of backlash underload during starting and stopping. The details of the motions of all knitting elements were recorded on a sailscope using suitable electrical transducers fixed to different parts of the unit. Two results were achieved: a change of sinker timing of about 40 or 50 degrees during starting which settles down in 10 courses of 50, and a change in guide giving a timing of about 30 degrees or so during the last three or four courses before stopping. The change in sinker timing would lead to more force being applied to the cloth loop during knock-over, and thus the loop would tend to be deformed. The change in guide swing timing would obviously effect the tension in the yarn."

An electronic tensiometer was used to record a detailed picture of the cycle of yarn tension during one course. In most tension pictures examined two peaks could be seen; one corresponding to shogging of the guide bars, the other due to the lap when the new loop is laid on the needle. It was found that lap peaks come earlier when the machine is stopping.

During the work it was obvious that starting and stopping rates were critical factors in stop line formation. Thus an electromagnetic brake—clutch unit was fitted. The brake made it possible to stop the machine at various rates. The clutch permitted the machine to be started with various accelerations.

Finally it was discovered that the intensity of the stop line decreased when the machine was stopped quickly. It was also found that there was an optimum starting up rate.

An explanation was put forward by Mr. Cowhig for the double minimum in a stop line, the first minimum being caused by an increased pull on the fabric loop during the instant be-

fore stopping. When the unit is at rest relaxation takes place so that when the unit starts again a few courses are normal but mean beam speed does not quite keep in step and the loops tighten again before returning to normal running. In shark-skin fabrics the results are similar during the stopping, but different effects occur when the machine is halted. The fabric seems to shrink, causing maximum spacing.

Mr. Cowhig concluded by saying that stop line intensity can be appreciably reduced by using optimum starting and stopping rates. But these rates can only be discovered by mill trials using a suitable brake on the units.

Here Mr. D. G. B. Thomas, his colleague, made his contribution. Mr. Thomas said: "As Mr. Cowhig has said, the aim of warp knitting research at our Association is the introduction of quantitative guides in the knitting of more uniform and better specified fabrics."

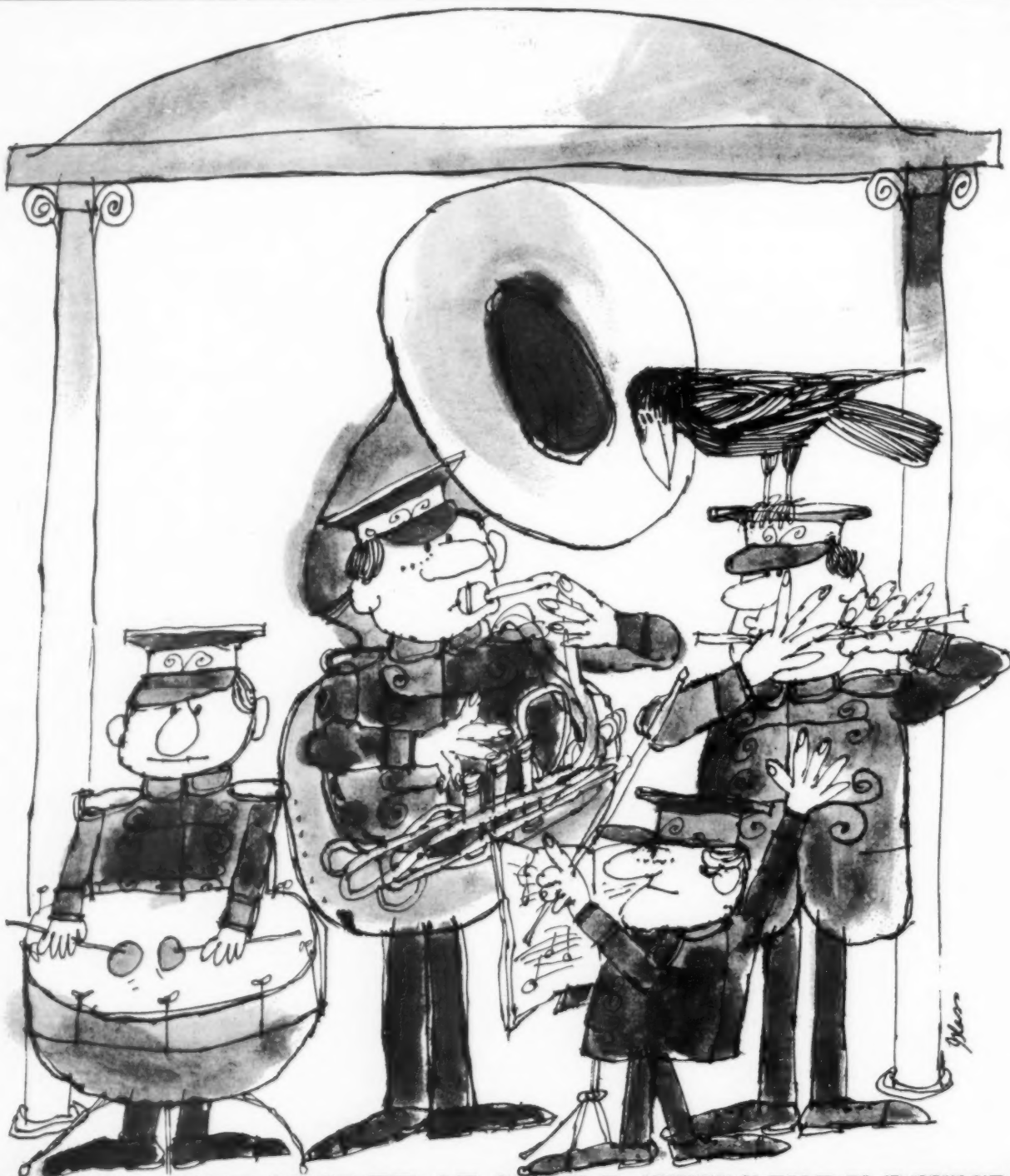
Since there is an optimum pattern unit structure, he continued, for subjection of processes like Schreinered enduring and loop raising, a member company suggested an investigation into the factors controlling loop shape. "In the course of experiments we found that there were some remarkable relationships between wet relaxed structures which seemed to call for more elaborate study," he noted.

He emphasized that the results obtained so far were in no sense final, although they are very promising.


Work was carried out with 50 denier Terylene because it was the yarn handiest at the time. Seven full sets of fabrics in various qualities were made up, giving a final selection of 75 samples. Course width and wale width for each sample was carefully measured before and after relaxation with a biaxial microscope.

Analysis of results showed that shrinkage in area after re-

(Continued on Page 17)



HARMONY...THE SECRET OF GLEN RAVEN'S YARN DIVISION

There are several soloists (departments) in Glen Raven's Yarn Division: a Research Color Laboratory; a Research Spinning Laboratory; a Modern Dyeing Plant. Yarn Division products include Super Bulk, Super Spun and Glen Star. Yet, despite their individuality, these departments perform magnificently in concert. From fiber to finish...everything is control-coordinated.  It is this meticulous attention to each process and detail which assures you the ultimate in quality and performance.

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 RUSSELL GANT CO., Burlington, N. C. (for South)

laxation was proportional to the sum of two yarn feed rates, and that the constant term in the equation was a function of the constant in proportionality:

$$S = mT + F(m)$$

S equalled shrinkage in area. T equalled total run-in in inches per rack. The quantity m varies with pattern and sinker settings, but the form of the function is not affected by these things.

The relaxed stitches per area can be calculated from the grey stitch density if m is known.

Relaxed wale width is a linear function of the unrelaxed wale width for all patterns and sinker settings tried. It is possible to reduce these calculations to one or more simple nomograms.

"Our next step," said Mr. Thomas, "is to repeat the experiments with two different deniers of rayon, and with other yarns." This should indicate the way the various functions vary with yarn properties. The ultimate aim is to produce means by which a mill manager can predict the finished structure without having to make a piece of fabric.

In conclusion, he said that it is of course possible that unforeseen complications may arise but the outlook is optimistic.

In answer to various questions, Mr. Cowhig and Mr. Thomas stated that measurements in their experiments had never been taken along selvages, but along the actual knitted fabric, and that although the project had been carried out on a compound needle machine, there should be no difference to results obtained on a bearded needle unit (it was suggested that this needed proving experimentally though.)

Knitted Loop Structure

G. A. V. Leaf, of the Hosiery & Allied Trades Research Association, gave a mainly mathematical paper on some recent studies of knitted loops. First he summarized the main results of fabric geometry work. He showed that provided some reasonable assumptions about the basic properties of knitted loops are made the fundamental relations of fabric geometry can be derived mathematically. The proof given, however, did not specify the numerical values of

the various constants involved in the fundamental relations. "These have to be found experimentally and depend on the up by the yarn when it is knitted."

Mr. Leaf discussed the several mathematical models of knitted loops which have been suggested by various authorities and concluded that all but one fail to satisfy certain essential conditions. He then gave an account of how the stresses set up in a yarn when it is bent into the form of a knitted loop can be studied when a satisfactory loop model is used.

Electronic Knitting

A paper on the Macqueen Tailor-knitting machine was presented by J. T. Millington, editor of the Hosiery Trade Journal. Mr. Millington said that the post-war dream of knitting men all over the world has been complete automation in the knitting room, with a highly skilled white coated engineer watching flashing lights of a control panel initiating and controlling the functions of a complete set of knitting machines. He would, said Mr. Millington, be supported by a relatively unskilled machine minder.

The Macqueen system makes this dream a possibility of the immediate future, he said.

The technique involves two basic conceptions. The knitting principle is based on that of knitting Basque berets, where the beret is made in wedge shape sections by decreasing the number of stitches in each course. Needles that are not knitting retain their loops until they are needed for the first course of the next wedge shape section. Thus section after section is produced like a continuous spiral of fabric. Linking waste courses are knitted to separate each series of wedges.

The inventor concluded that if a large enough "beret" were produced, it could be a circular skirt. By altering the design of the widenings and narrowings any shape of skirt can be knitted. These could be produced one after the other, joined by linking waste threads. An unlinked skirt is virtually a cape, and if not a cape—why not a dress?

Sleeves can be separated

from the body of the cape by linking waste yarn from the hem of the cape to the underarm. The sleeve is then linked.

It is believed that skirts, dresses and coats, suits, swim suits, corsets, and men's and children's wear can all be produced by this method. Garments made from this method are produced with the courses running lengthwise and not horizontally.

When garments knitted by this method appear on the market they will be sold as original garments made by a new method. "It is in no way desired," said Mr. Millington, "that they compete with existing knitted apparel, but rather that they should open up new inroads for knitting in the clothing field and enable couturier designed clothes to be produced as entire garments on a knitting machine, with all the shaping, pleats and bows knitted as an integral part at one and the same time."

The electronic control equipment, giving initiation, control and supervision of manufacture, is the second fundamental conception. This formed by three basic items: a tape reader cubicle; master control cubicle; and individual machine control cubicle. One tape reader cubicle and one master control cubicle can control up to eight "slave" knitting machines, but there is one machine control cubicle for each knitting machine.

Punched plastic tape is loaded into the reader cubicle as film is loaded into a projector. The master control cubicle decodes, amplifies and modifies the signals from these tapes and passes them to the individual knitting machine control cubicles. They in turn control the production of the associated tailor-knitting machines.

The actual knitting machines are basically V-type flat knitting units. They work on a double-system, with 72 inch knitting widths to be built in gauges ranging from 8 to 16 needles per inch. It is envisaged that gauges up to 40 needles per inch will eventually permit shirts to be produced on these machines.

Each machine has eight yarn carriers, with provision for pigtail tie-up magazine supply

from two packages for each carrier. Each yarn has its own automatic tension control. Dish-shaped stands at each end of the unit hold the packages.

The machine frame is built on kinematic principles. There are four resilient feet, two at the ends of the machine at the back and two close together in the center of the front. All the feet are connected to a substantial tubular member running the full width of the machine and although the weight of the machine produces bending movements, these are absorbed by this member and are not passed to the needlebed.

Needlebeds consist of six inch sections of hard anodised aluminum, mounted to permit alignment to be easily adjusted. Stainless steel compound needles are used, each working in conjunction with a jack and clavette. The butts of the needles pass along the face of a magnetic cam. When the cam is energized the jack is drawn to the cam face so that the needle is lifted to clearing height. Stitch cams lower the needles in the conventional way.

A double system cambox, ten inches wide, traverse knitting width at each stroke. Loops can be transferred from back to front bed or vice versa (whether cambox travels to left or right). This can be done selectively or collectively in both directions. Rear needlebed racking can take place over 12 needle spaces left or right and can be done one, two or three spaces together.

The cambox is driven by twin steel belts and runs in tracks, resting in nylon tired ball races for easy movement and to give it perpendicular alignment. It is pressurised to be dust proof. Mounted on it along with the cams are 24 magnetic selectors for starting the clearing and transfer movement of selected needles, 8 stitch cam actuators for determination of stitch length, transfer cam solenoids, corrector unit, plugs and sockets.

Two long shafts in the fabric take-down mechanism run the full width of the unit and carry toothed nylon wheels, staggered and frictionally mounted to grip

until a known torque figure is

(Continued on Page 32)



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Men's & Boys'**Classic Sweater Styles Paced Orders At Two Chicago Area Market Shows**

By BENN OLLMAN

CHICAGO, Ill. — Last fall's top selling sweater styles apparently have had it. They were not to be seen in any of the showrooms during the April 30-May 5 fall and winter market at the Merchandise Mart or the Palmer House. Absent were the high-style bulkies and shawl collars. In their place were the good old reliable classic numbers with some very pertinent modifications, however. Color and trim were important techniques employed by mill designers to update the classic sweaters slated for fall selling.

On its vast eighth and ninth floors, the Merchandise Mart's optimistic, Operation Upturn, slogan seemed to have a buoyant effect on market exhibitors and visitors. Bright signs all over the place heralded the project.

Bill Watson, Danny Marcus and Edith Marx, in the Robert Bruce space at the Merchandise

Mart, were enthusiastic over show results.

According to Marcus: "This is one of the finest shows I can remember. It was properly promoted, and pulled dealers from all over the territory. Our Sunday traffic was tremendous."

Retailers ordered about 65-70 per cent of their fall sweater needs in pullover styles, and the balance in cardigans, Marcus said. By comparison, the Robert Bruce sales chart shows that last year cardigans accounted for only 15-20 per cent of the business written.

Mid-weight Orlon and wool blend convertible crew necks and V-neck sweaters were the top selling Robert Bruce numbers. Six- and eight-button cardigans also met with strong approval. Top selling colors were white, blue and soft greens. The "tiger" shades were well received.

Marcus also reported strong

activity with Robert Bruce's ski sweaters and the his/her sweater combinations.

Reports from the Pine State Knitwear Company's Mart show-room were less bright, noted spokesman Robert Zimmerman. Ordering was "fair," he said, due to the lagging show traffic count. "This unseasonable spring weather has kept dealers in a very cautious frame of mind," he added.

Zipper and button coat sweaters predominated here. Pine State's turnover turtleneck collars were also good numbers.

With almost a dozen his/hers combination sweater offerings in the current Milwaukee Knit Products line, Nat Fields reported dealers were including several in each order. Fields also claimed some success promoting men's and boys' sweaters in father and son combinations for fall and winter merchandising.

White, black and combinations of both were very important color considerations, Fields added. Retailers also displayed strong interest in Orlon sweaters. A standout was a novelty Purrfur number made of special

brushed Milliken Orlon yarn, and completely washable.

V-necks and attractive red, white and blue striped pattern cardigans of 100 per cent wool to retail at \$15.95 were the main attraction in the Botany display room. Also big were Botany's all white, mid-weight V-neck pullovers.

Heading McGregor-Doniger, Inc.'s sales chart, according to Ken Swanberg, were 100 per cent Shetland wool sweaters featuring high V-neck treatments. Flat knit cardigans totaled about 30 per cent of the orders written at this show.

The market buying trend also showed a strong move to wool and mohair blends in zipper turtleneck cardigans and pull-overs.

Color played a strong role in McGregor-Doniger, Inc.'s fall line. The traditional Ivy sweaters have been injected with an attractive, highly saleable assortment of colors which include blue, white, black and the new, so-called tiger shades.

"This is one of the finest fall shows we've had for a long

(Continued on Page 21)

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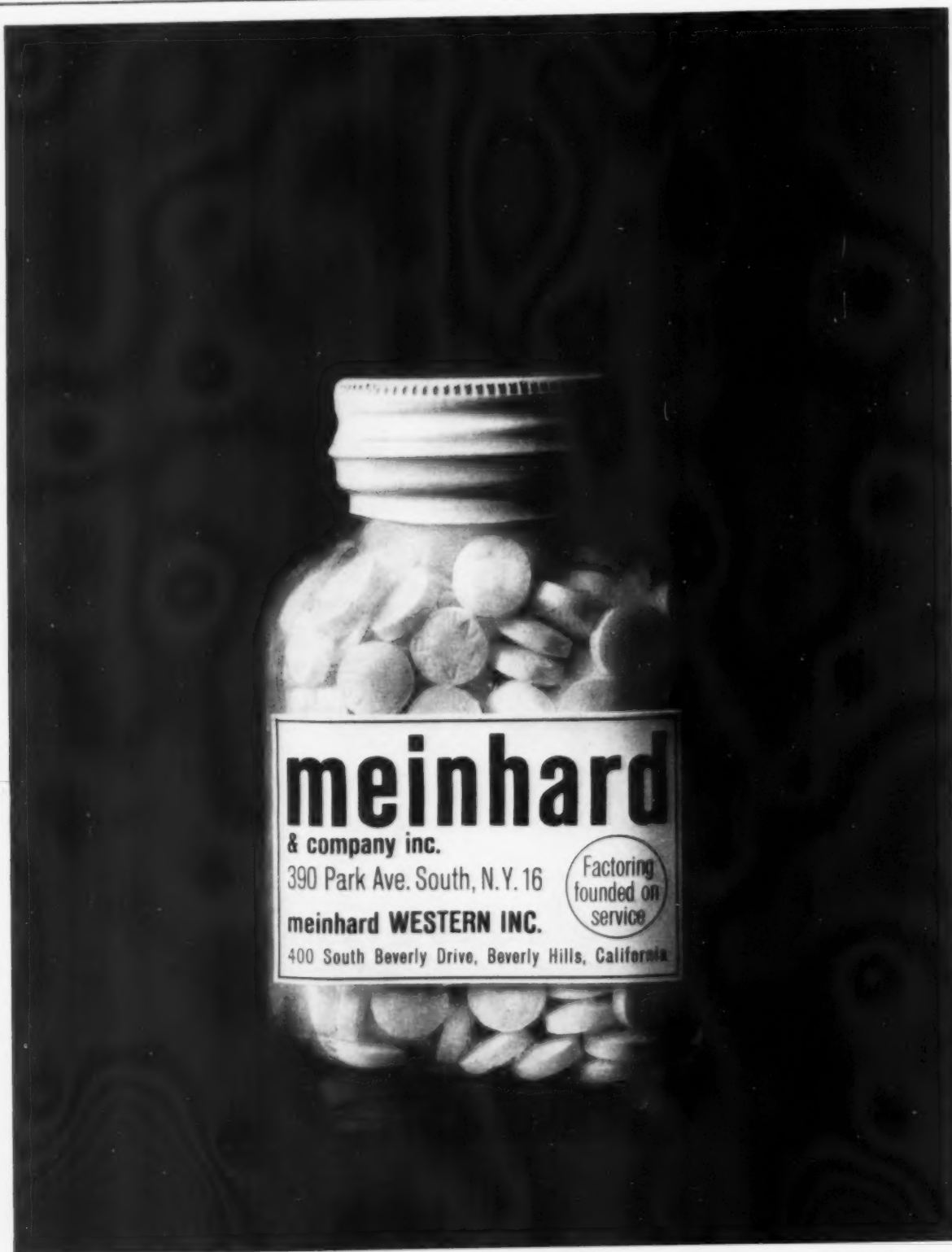
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time," said Swanberg. "There has been an awful lot of shopping, however, as dealers try to see what may take hold for fall. There are some pretty good sized sweater inventories on retailer shelves, but very few dealers say they are seriously over loaded."

One big fact noted at this show by Sam Straus, sales representative for Phillips-Van Heusen Corp., was the higher percentage of wool sweater business he wrote. Despite this resurgence of interest in wool, said Mr. Straus, his order book reflected continued strength for Ban-Lon and Orlon numbers as well.

Keen interest was displayed in Van Heusen's two-ply washable zephyr wool numbers, according to Mr. Straus.

Revere Knitting Mills' Pat Boone sweater promotion continued to earn a solid reaction from dealers, said Martin Zeiger. The best seller in the Pat Boone collection of six numbers was the long sleeve zipper cardigan.

Among Revere's best selling numbers was an eye-catching harlequin pattern mohair blend pullover V-neck, to retail at \$10.95.

Despite the current interest in "tiger" shades, Zeiger listed light oxford, grays, tans and heather among his most called for colors at the market. Revere's ski sweaters also received a remarkably good call, he added.

Puritan Sportswear Corp.'s automatic wash and dry 100 per cent Dylanized lamb's wool sweater is "the greatest thing to hit the market," Paul Gilmartin claimed. "It has been very successful here," he said.

Most active number in the Puritan line, said Gilmartin, was a two pocket trim cardigan to retail at \$15.95. Dealers were buying in all colors. Moving at a good pace were wool and mohair blends in muted shades, featuring black figure designs.

Palmer House Show

The Illinois Men's and Boys' Apparel Club market at the Palmer House ran two days shorter than the concurrent event at the Merchandise Mart. It was scheduled from April 30-May 3. Exhibitors claimed that they were pleased with the more concentrated schedule. Most

agreed that the volume of business written after the first two or three days of the market seldom amounts to much, anyway.

Palmer House traffic was "exceptionally heavy" on the Sunday opener, according to Len Winick and Sol Carnow, Carwin Associates. Their Vargeo Knitwear line enjoyed a healthy run of business. Ban-Lon and Antron numbers outsold the rest of the line. Several new Orlon Sayelle cardigans made a very favorable impression on dealers stopping in to buy fall goods. There was a good call for the high shades, with oranges, purples and turquoise numbers active.

Although he wrote a number of sizeable orders at the market, Donald Farber, Campus Sportswear, felt the timing for this market was off.

"Most dealers are still concerned about their sweater inventory backup," he said. "They aren't ready yet to make complete plans for their fall promotions."

A big portion of the Campus Sportswear orders ran to bright colors in knit shirts and sweaters. Most popular were the zipper front and high V-neck numbers.

Fall Buying Heavy At Indiana Show; Fill-Ins Sparse

INDIANAPOLIS, Ind. — Salesmen were quite pleased with knitwear buying at the summer and fall Market of the Men's and Boys' Apparel Club of Indiana, Inc., April 23-25.

Almost all the buying was for fall. Fill-ins were few because chilly weather in this area has deterred buying of warm weather apparel by the public.

Danny Marcus, Robert Bruce Knitwear, pointed out the trend toward midweight in sweaters. The classic look has forged ahead of the bulky type in sales.

Preferred styles are the square crew neck, V-neck and six-button cardigans. All styles were in Orlon. Stone blue and tiger (a burnt orange) were the most prominent colors. White was also reported good, in addition to a soft bay leaf green. A new color of camel was popular in a rick rack weave with ribbed inset shoulders and neck.

(Continued on Page 23)

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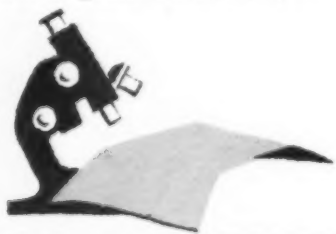
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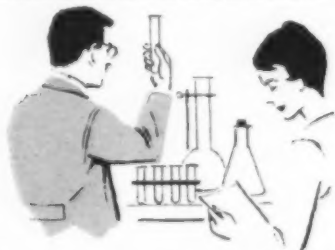
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Blazer stripes were good in shaggy sweaters in both cardigans and pullovers. A blueberry, gray and white, and also a charcoal, green and navy were favored.

Mr. Marcus said he was doing a big job with ski sweaters. Promotions of his and hers sweaters have had fine results.

The same trends are true of the boys' line. In fact, everything made in the firm's boy's line is carried out in the men's.

H. G. Niebrugge, Sarby Sportswear, reported a good response to a zipper number with a new cadet collar for boys. Orlon is prominent in the boys' line.

Cadet blues and heather green are in demand, and gold is still acceptable. Grays are favorites, and in the 6-12 range, red is very good.

The bulky shawl collar is still most important. There is an excellent response to argyles.

In the men's line, it was reported again that the bulky type is not as prevalent. There was a good acceptance of vertical stripes in both cardigans and V-neck slipovers. The demand for ski sweaters was especially

strong.

The firm featured a good range of zipper sweaters which proved popular with the merchants. Cardigans were in the biggest demand. A good number was a full-zipper bulky with a convertible collar in a wool blend. It was excellent in stripes. There is also interest in the new Regatta, in muted tones in a slip-on, two-button wool.

Two cardigans that sold well were an imported Australian lamb's wool, and an interlock knit virgin Orlon, both made with jacquard trim on a border on the neck and pockets.

The color trend is toward heather tones of brown, blue, green and gold. The V-neck slip-on is stronger than the shawl collar.

Stewart Alper, Brentwood Sportswear, said there was a trend back to bulky styles, and that the lighter weight flat knits are most important. He also stated the sweater line is well received, and the cardigan is very, very strong.

In the V-neck type, both the high-V and classic styles are good. A promotion in 100 per cent alpaca sweaters has been

most successful. Also successful is a lightweight brushed wool.

Ski sweaters which have been fairly dormant, also were reported stronger by Mr. Alper.

A sweater very much in demand is the wash-and-wear in 65 per cent wool and 35 per cent Kodel.

In colors, the new British blues were stated to hold first place, with olive, white, gold and tiger also popular.

In a pattern number, the argyle is brushed wool was a good seller.

Jean J. Battreall, Puritan Sportswear, said there have been purchases in brushed Orlon and mohair blends for new things.

He, too, cited the tremendous turn back to the classic type sweater with flatter stitch. He said he does the biggest business in Ban-Lon.

Lamb's wool and also Ban-Lon wash-and-wear in five garments are big items. The basic styles in these are the V-neck pullover and a six-button cardigan sweater.

Newest colors are slate blue, heather green and sunset. The basic of grays and natural follow.

Ban-Lon shirts in a wide variety are year round sellers. The percentage of short sleeves for fall is 50-50 since the men like to wear them under sweaters the year round.

Newest shades are teal blue and bengal which is a burnt orange. The shirts come in little boys', big boys' and men's sizes.

The firm shows a wide range of shirts in plain colors with fancy stitches which are very important.

Frank Koday Co. Moves To 350 Fifth Avenue

Frank Koday Co., mill representatives to the wholesale trade, has moved to larger quarters in Room 2204, Empire State Building.

Synthetic Fibers

Cyanamid Names Mgr.

The fibers division of American Cyanamid Company has appointed C. R. Stock manager of the fibers application laboratory at its Bound Brook Plant to replace H. C. Haller, who has resigned.



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Swimwear

Low Back Knits Tops In Alabama Shops

BIRMINGHAM, Ala.—Knits are outselling woven cotton and elasticized suits two-to-one in swim suit initial sales volume, buyers for leading retail outlets' sportswear departments report here.

A number of stores have already re-ordered certain good knit numbers, all of which are low-back sheaths. Black has proved the best color and \$9.95 to \$16.95 the best price ranges.

Buyers place a small portion of their swim suit budgets in initial buying at market, relying on excellent deliveries via quick, efficient manufacturer service to fill the swim suit bill on a re-order basis.

"I always buy light, and consequently I am always re-ordering," declared the sportswear buyer for an outstanding downtown junior department store. "But I like it that way. It enables me to keep my finger on my customer-response pulse, and prevents over-stocking in num-

bers that do not catch the public fancy."

An outstanding suburban operation is selling 60 per cent of its swim suit volume in low-back knits in black and aqua. A promotional pull is furnished via a 30-foot knit swimwear window display, both colorful and unique.

Boyd's Window Display Features Catalina Theme

BATON ROUGE, La.—It's swim suit time in Baton Rouge, and every store is pushing displays of these garments yet none was more attractive than that of Boyd's Fashionette. The display area measures a mere 4 x 8 feet and protrudes from the building. The front and side panes provide excellent viewing, for the store adjoins the parking area of a bank branch and the street, both of which face constant heavy traffic.

With such a small area William Boyd must plan display which will instantly catch the eye. This he did with his recent Catalina window.

Using the much publicized Catalina white Lastex swim suit

with its overall print of lilac and purple as the central figure, he captured the carefree mood of the beach by surrounding this with casual beachwear.

To further emphasize the brand he was featuring, he covered the window floor with Catalina boxes, clearly showing the manufacturer's name. To add interest, tubular boxes of Catalina briefs were grouped in threes or fours and spaced at intervals. Beach bags, hats, colorful towels and another model wearing a Catalina cotton print complimented the central figure.

Two groupings of Thermo Joy cotton knits known as The Thing were spread in a fan-shape to display the attractive patterns, and while inconspicuously placed at rear angles these were nevertheless well chosen.

"The window," Mr. Boyd said, "has attracted much attention and has brought people into the store. He advised that while there is no definite increase in buying at this period, he knows there will be demand for the bathing fashions in the very near future.

R-M-R Regional Sales Mgrs. Meet On '62 Line

LOS ANGELES, Calif. — Regional managers for Rose Marie Reid, swimwear manufacturers, met here recently at a quarterly session with home office executives and department heads. Representing the firm's regional sales offices across the country, the managers conferred on current progress and participated with management in formulating preliminary plans for the session ahead.

The managers saw a partial preview of the 1962 swimwear line, including five prophetic styles which have been singled out for early release to key stores this summer. This pre-season group, representing significant styling and fabric trends for next year, is an all-Spandex collection and reflects the firm's current successful pioneering with synthetic elastomers.

The meetings, under the general chairmanship of Rose Marie Reid, president Paul Habersfeld, were attended by Nat Edelstein, vice president of sales from New York and George Sobel, Richard Eisner, Murray Sonnett, and Merman Wapnick.

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Women's & Misses'**Koret Stresses Unusual Jacquards, Novelty Necklines**

A sampling of Koret's latest sweaters highlight novelty silhouettes, necklines and details and are drawn from many fiber groupings. Clockwise: a versatile, convertible collar on a shaker stitch, all-worsted wool slip-on; one of Koret's Tanjors which is a blend of 75 per cent wool and 25 per cent angora rabbit hair; a key-hole cardigan with tab detail on one side; a square neck tunic with full-fashion detail (also a Tantor); an all worsted zephyr wool slipon with V-placket and rib detail on wing collar, cuffs and lower edge; two all worsted wool diamond jacquards—a novelty neckline slipon and a Chanel-type cardigan; and a boatneck slipon knitted in a multi-color baguette jacquard pattern.



Mill News

Robert Bauer Joins Flagg-Utica Corp.

Robert Bauer has been appointed a vice-president of the Flagg-Utica Corporation to head fashion knit fabric, yarn and new product development, it was announced by J. T. Flagg, chairman of the board and president of the company.

Mr. Bauer had been with Millikens Woolens, Inc. since 1956. He was in charge of yarn development, technical services and quality control for the sales yarn department. He was also responsible for fabric development and quality control in Milliken's knitting department, which produces double knit fabrics.

Prior to joining Milliken, Mr. Bauer was vice-president and general manager of Middletown Knitting Mills, Middletown, N. Y., manufacturers of knitted sportswear for men and women, from 1946 to 1954.

Philip Halperin, president of Knitfabs Corporation, a wholly owned subsidiary of Flagg-Utica, announced that Mr. Bau-



ROBERT BAUER

er was elected chairman of his company's board of directors. Knitfabs produces double knit fabrics knit on Morat and Fouquet machines. These high-styled fabrics are sold to the trade through Fox-Wells Company, selling agents.

Harold Margolin Named Eastern R-M-R Liaison

VAN NUYS, Calif.—Harold F. Margolin has been named Rose Marie Reid purchasing liaison on the East Coast to work

directly with manufacturers.

Mr. Margolin, assistant for the past two years to James Little, procurement manager, in Los Angeles, will transfer to the swimwear company's New York office at 1407 Broadway.

Emple Knitting Mills In Streamlined Plant

(Continued from Page 13)

dising experience from the previous season or trend pattern to serve as guidance at this stage. The importance of efficiency to the success of this type of an operation is not hard to discern.

Not much time is spent on paperwork, and no IBM machines are needed. Three copies of orders are made as they are received, one for the office, one for the shipper and a third to the general manager. The original goes to vice president Paul Emple, production control manager, for processing.

A job ticket goes along with each lot through the entire system and, in addition to the conventional information such as style, color, fabric and finish data and weight of material, number of pieces and cut in-

structions, also bears the assigned delivery date and a monthly serial number symbolized as "57" or "67," indicating the order the seventh to be put into production in May or June. This not only enables control management to check the progress of any order against the due date but also to determine at any point the state of production against the monthly schedule. By this means, should a bottleneck develop along the line, it could be quickly located or, rather, it could be prevented before it happened.

Production Control

Control management indicates the number of the machine to be used as well as an estimate of the material. The machine operator on completing a job detaches a segment of the ticket, notes the amount of yarn used on the back and returns it to production control while the unused yarn goes back into stock.

The wash date of each lot going into pre-cut storage is noted in the control book at the check-out station of the cutting department, thereby pin-point-

(Continued on Next Page)

Strictly

Stickley

"To live content with small means; to seek elegance rather than luxury, and refinement rather than fashion; to be worthy, not respectable; and wealthy, not rich; to study hard, think quietly, talk gently, act frankly; to listen to stars and birds,

To babes and sages with open heart; to bear all cheerfully, do all bravely, await occasions, hurry, never. In a word, to let the Spiritual, unbidden and unconscious, grow up through the common. This is to be my symphony.

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ing work-traffic at three critical stages in addition to the individual job check so that all spaces can be kept loaded at all times which, Mr. Nass said, was the principle in mind.

White Stag Dedicates New Building Site

PORTLAND, Ore.—Formal ground-breaking ceremonies were held here early in May for White Stag Manufacturing Company's \$850,000 headquarters building, to be built at the main plant site at S. E. 52nd Avenue and Harney Drive.

Shovel Used Again

The first ground was turned by White Stag's president, Harold S. Hirsch, using the same spade with which his father, the late Max Hirsch, broke ground for the company's first building on the site four years ago. The latter building is said to be the world's largest garment plant on one floor and under one roof.

At this month's ceremonies, Mr. Hirsch told his audience that "White Stag has always been here in Oregon and always will be here." The company operates other plants in San Francisco; Muskogee, Oklahoma; Manchester, New Hampshire, and Amsterdam, New York—in addition to its international joint ventures and licensees.

Ready First Of Year

The new headquarters building is expected to be ready for occupancy the first of next year, and will add almost 50,000 square feet to the Harney Drive operation. Present headquarters on West Burnside Street will then be released for the exclusive use of the Canvas Products Division, now occupying a part of the building, which manufactures tents and sleeping bags, skin-diving equipment and other sports equipment.

Bobbie Brooks Acquires Abby Michael, N.Y.C. Co.

CLEVELAND, O.—Bobbie Brooks Inc., women's knitwear manufacturer, has taken over Abby Michael, Ltd., New York City producer, a move that will upgrade the Brooks line and increase its earnings per share an estimated five per cent.

Abby Michael, whose annual sales now top \$2,200,000, will continue under its present name and management, as a wholly owned subsidiary. The

firm produces dresses, blouses, skirts, pants, playclothes and coordinates that are sold in some 2,500 retail outlets.

Knitwear Abroad

Joint Cashmere Efforts Started In Scotland

GLASGOW, Scotland (Via Scottish Amalgamated Trade News Agency)—The development of larger units and of co-operative capacity in British industry has been reflected in the knitwear field as elsewhere. Mergers, amalgamations and co-operative promotions have become very much the rule, with an increasing emphasis on knitwear as a factor in a wider, more comprehensively based unit.

Firms Consolidating

Alternatively, specialist knitwear firms which have established their own activities effectively, are consolidating by cooperating in a variety of plans to assist all the firms in the group. Basis of this policy is that it is possible for competitors to join in promoting their general interests which benefit all, while retaining individual competitiveness and individuality.

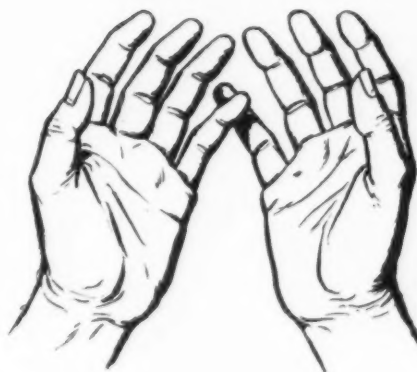
Six Firms To Promote

Example of this has been currently given in the Hawick trade where cashmere is a very strong interest. Six famous knitwear firms here have agreed to promote cashmere generally, accepting that each of the six will benefit to the extent that cashmere sales increase. These six firms are Ballantyne of Peebles, Barrie and Kersal of Hawick, Braemar, Pringle and Lyle and Scott, all of Hawick and Munro of Edinburgh. The first aim will be to increase cashmere sales in the home market and a joint campaign is proposed for the autumn. Thereafter the six firms will seek to increase worldwide trade for cashmere garments made by the six and will go after increased export business.

This move is in keeping with the current demand for increased exports from all British industries. Knitwear has a most satisfactory reputation in the export field and has provided valuable overseas earnings for the British economy; that effort will be stepped up very considerably in spring, 1962.

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Knitted Yardgoods

Abaco Has Irish Fisherman Knits

Abaco Fabrics, Inc., manufacturers of Bonda Knits, have two important stories to tell. First, that they have supplied Bonda Knits to the accessories trade for use as gloves and trims on handbags and boots, and second, that they have duplicated the hand-knit Irish fisherman look in 100 per cent cotton.

This is the first time Bonda Knit fabrics have been used in the accessories field. Glove and handbag manufacturers sampled these fabrics for use in their fall lines. Thus far, glove manufacturers have shown primary interest in a doe suede fabric composed of a fiber blend of 85 per cent acetate and 15 per cent nylon. This comes in a wide range of solid colors including gold, red, beige and sand and is also printed with an abstract fishnet design. Also a favorite for campus and career gloves is a pin rib knitted of 100 per cent virgin Orlon. Laminated, these gloves will give warmth without weight in winter and will be relatively lightweight

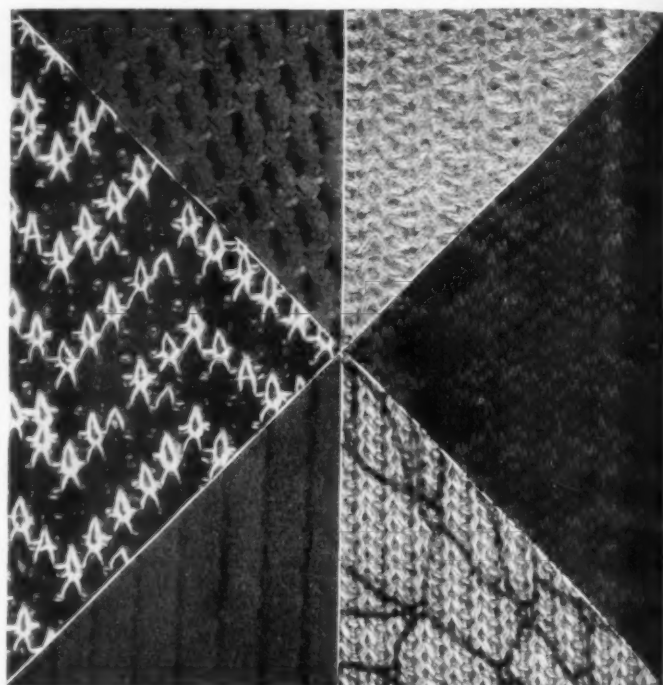
in the spring.

Handbag manufacturers chose bulky rib cottons and Irish fisherman knits for use in satchels, totes and carry-alls. These fabrics also team beautifully with leather in a more rigid type bag. Even a well known manufacturer has used knitted fabrics for boot trims and at-home and apres-ski shoes.

The Irish-type knits are offered in a wide range of solid colors. Self-textured designs are in argyle, cable, links, figure "S" and other novelty dimensional patterns. All of these, as well as other Bonda Knits are laminated to Scott Apparel foam.

Dimensional knits supplementing the line of Aran Island designs are a one- and two-color moss stitch, a two-color tweed and a self textured solid color stripe. Also, a two-color herringbone stripe, a solid color basket-weave effect and other fancies.

Cotton bulkies in rib and half cardigan stitches constitute a large segment of the Abaco knit line. There are plain and fancy textured ribs in a variety of stitch sizes—from fine to coarse gauge—and an even greater range of colors from the new high fashion shades to subtle



Abaco laminated fabrics highlight surface texture and design through stitch and patterning. Above left and clockwise: a two-color, dimensional moss stitch; a shaggy 80/20 Orlon and mohair fabric knitted in a medium gauge, half-cardigan stitch and offered in new high colors; a cotton geometrically patterned jacquard; abstract fishnet design over a ribbed cotton fabric; a wide wale, cut velvet type coating fabric knitted of 85 per cent acetate and 15 per cent nylon and a 100 per cent cotton dimensional herringbone design.

neutrals. Another half cardigan blend of 60 percent wool and bulky fabric is composed of a

(Continued on Next Page)



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40 per cent cotton.

Heavy, textured fabrics are another part of the Bonda-Knit collection. These are intensioned primarily for the coat trade, but can also be used for suits and jacketed dresses in which the jackets only would be laminated.

These coating fabrics consist of a cut velvet look that is knitted of an 85 per cent acetate and 15 per cent nylon blend, a sueded velour of 100 per cent nylon and a 80 per cent Orlon, 20 per cent mohair blend. The latter fabric, because of its mohair content, has a somewhat shaggy texture. A sampling of colors for the coating materials are cyclamen pink, gold, purple and burnt sienna. An unusual pebble crepe, offered in many solid colors including bone, beige, sand, royal and a grayish blue, could also be used for coats, suits and dresses.

Directed toward the separates and sportswear trade are fine gauge laminated cotton fabrics. Included are many colorful patterns including Scandinavian, stripes, tweeds, abstracts geometrics, paisleys, a dot and dash design, a window pane check and a multi-color stained glass design among others.

Each of these jacquard designs is color coordinated to a wide rib accordian type unlaminated cotton fabric to be used for collars, cuffs and hip bandings.

An elegant note is found in Lurex threaded fabrics. Here the metallic is used as an allover allover effect or simply for a subtle touch.

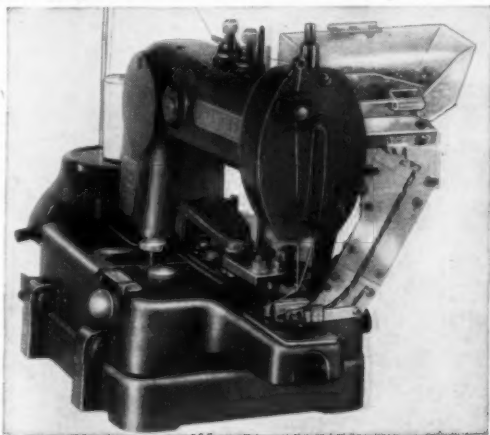
Financial

James Talcott Reports Record First Quarter

James Talcott, Inc., financing and factoring firm, has reported a record consolidated net income in the first quarter of 1961 of \$1,172,818, compared to \$1,080,515 in the same period of last year.

R-M-R Declares Dividend

LOS ANGELES, Calif. — The board of directors of Rose Marie Reid, leading manufacturer of women's swimwear, on April 26 declared regular quarterly dividends of 15 cents a share on the common stock and 12½ cents a share on the five per cent cumulative convertible preferred stock, both payable May 24 to shareholders of record May 10.



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KNITTING PATENTS

NEW BRITISH WARP KNITTING MACHINE GRANTED U. S. PATENT—A new warp knitting machine invented by Allan W. H. Porter, Burton-on-Trent, England, has been granted U. S. Patent No. 2,978,887, which the inventor has assigned to Hobourn-F.N.F. Limited.

The patent covers a flat warp knitting machine of the type comprising a row of reciprocable needles each of which has a hook and a shank and means for periodically closing the open side of each hook. Warp thread guides lay warp threads in the hooks of the needle, and means are provided for cyclically displacing the guides lengthwise along the row of needles to perform a lapping movement and at least one shogging movement in each knitting cycle. Sinker-like members hold loops knitted by the needles down around the shanks, and a driving shaft is connected to turn in timed relationship to the cyclic movement of the guide members.

The shaft is operatively connected to the needles and hook closing means are incorporated for alternately opening and closing the hooks once during each knitting cycle.

Cyclically timed actuating means operatively connect the driving shaft to the sinker-like holding down members to oscillate them transversely to the row of needles from a first position extending across the plane of movement of the needles, while the hooks are open, to a second position in front of the plane, while the hooks are closed, and back again to the first position once during each knitting cycle. Additional cyclically time actuating means operatively connect the driving shaft to the warp thread guide members to oscillate them transversely to the row of needles from a position in front of the plane of movement to a position to the rear of the plane and back again to the front of the

(Continued on Next Page)



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plane of movement twice during each knitting cycle. An important characteristic of the machine is the fact that the cyclically timed actuating means keep the warp thread guides in front of the needles and the sinker-like holding down members near their first position while the lapping movement takes place and also when one shogging movement is initiated and while the major portion of the shogging movement takes place.

METHOD PATENTED FOR MAKING GARMENTS ON STRAIGHT BAR KNITTING MACHINES—A method for the production of garments on straight bar knitting machines invented by Neville Cuthbert Ladbrooke, Leicester, England, has been granted U. S. Patent No. 2,978,888, and assigned by the inventor to William Cotton Limited, Loughborough, England.

The new patent covers a straight bar knitting machine designed for effecting changes between rib and non-rib loop formations in fabric during the latter's production on a straight bar knitting machine. The ma-

chine comprises a first bed of simultaneously operable needles and means for causing needles of this bed to knit one facial set of loops of a rib formation and a second bed of simultaneously operable needles and means for causing the needles of this second bed to knit the second facial set of loops of the rib formation. Relative positioning is positively effected between new yarn and old loops on the needles of the second bed to ensure satisfactory drawing of this new yarn through these old loops. Finally, means are provided for transferring the second facial set of rib loops from the needles of the second bed to needles of the first bed, which latter loops consequently provide jointly with loops already on needles of the one bed a non-rib loop formation.

New Bulletin Published On Avril Stable Rayon
PHILADELPHIA, Pa.—American Viscose Corporation is circulating a new technical service bulletin covering characteristics and properties of its new stable Avril rayon, Fiber 40.



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Parley Covers Knitting Problems

(Continued from Page 17)

reached. In operation the shafts are rotated by a motor at a speed allowing maximum take-down. Fabric is drawn off until no further take-down is possible and the wheels then slip on the shafts.

In the reader cubicle one design control tape and two pattern tapes are loaded. These are 5½ inches wide, with standard 35 m. sprocket holes down one side. The design tape program knitting width (number of last needle to knit); quality of fabric (loop length of stitch); color (choice of yarn carrier); speed of knitting choice of pattern tape; repetitive knitting racking or transfer; and the beginning or end of the garment. This tape can carry 9000 courses, and is read by the control reader and the reader cubicle pattern tapes are read by two pattern readers.

The control reader overrides a pattern reader to start collective knitting actions on the front bed only, on the back bed only, on both beds together, and on alternate needles on the back bed.

The two pattern readers read punched tapes 36 holes wide sequentially hole by hole and and line by line to give patterning instructions for knitting and non-knitting. Two courses are read at once; one for the leading and the other for the following system. The capacity of each pattern reader is 150 courses, which on a 10 gauge machine embraces a possible 216,000 selections.

The pattern tape is in endless band form and is subdivided into frames, each frame for one course of knitting. Within each frame there is a hole position for every needle in the machine; an actual hole selects a needle. A helix of angled light reflectors scans the tape as the cambox traverses the machine. Holes are sensed by a series of silicon solar cells which give an output pulse to the pattern gate. The tape moves forward as the reading drum rotates, thus giving a sequential scan.

When the cambox stops, the tape advances two frames so the reading heads are under the same needle positions as in the previous frame.

The needles are selected by magnetic selectors. Each selector acts on every third jack to increase selection time. Each half of the cambox has six active selectors. At the start of a traverse movement the appropriate pattern gate opens and as the pattern tape is scanned output pulses from the solar cells are fed to the open pattern gate, which remains open for the duration of the knitting cycle of that course. The pulse is shaped and then amplified by a power amplifier on the master control cubicle. This is to limit the duration of magnetizing and demagnetizing the magnetic selectors to 3/1000 second.

A hunting contact switch and overshoot control determines the traverse movement of the cambox, to within 1/3 width of a needle.

The required stitch length is put on the design control tape, consisting of an arrangement of up to four holes. Sensing fingers in the master control cubicle complete the circuit and energize the appropriate solenoid to move a stitch cam to knit a stitch length according to the instructions.

Two synchro transmitters on the cambox and two other transmitters in the master control cubicle control the yarn carriers. These four transmitters are common to all the knitting machines of one set and are driven by the cambox controllers.

A transmitter in the master control cubicle governs racking on all machines in one set. A rotary stud switch connected to the racking drive measures the relative position of the two needlebeds (one stud for each needle position). A relay decoder working from the main control tape energizes the correct rotary stud. Another relay is de-energized to start the racking motor drive which operates until it reaches the energized stud. This in turn energizes the racking drive relay to carry out racking over the desired number of needles.

Loop transfer action is effected by two traverse movements of the cambox. The first movement selects and sets up the needles from which the loops will be transferred; the second carries out the actual transfer.

Knitting Machinery At Leipzig Fair

(Continued from Page 9)

The cam sections in both cylinder and dial have clearing cams which can be put out of action for idling at particular feeds. There is a built-in illumination of the knitting head and an electrical stop motion which operates in conjunction with signal lights in order to enable the immediate tracing of possible faults which may have caused the machine stoppage.

The plastic spur gear type feed wheels have a five-step speed adjustment, and the lubrication of the cam races and important machine bearings is fully automatic and centrally controlled. A blowing installation prevents the accumulation of fiber fluff.

The machine is equipped with a three shift fabric counter. The fabric roller for winding up the fabric operates through a differential in order to compensate for the increase in the diameter of the fabric roll as knitting proceeds. When the fabric roll has reached a predetermined size, the machine stops automatically.

All electrical control elements are enclosed in a safe control box. The heavy machine stand causes the machine to run free from vibration and torsional stresses.

George Miller Promoted At Scott & Williams

LACONIA, N. H.—George H. Miller, formerly vice president in charge of manufacturing, has been appointed executive vice president of Scott & Williams, Inc.

He was a supervisor at Milton Bradley Company, games manu-

facturer of Springfield, Mass., and Monsanto Chemical Co. before joining Scott & Williams in 1940 as head of the standards department.

Sewing

Pedestal-Type Stand Offered By Singer

Availability of a new, compact pedestal-type stand and table unit has been announced by Singer Sewing Machine Company.

Designated as the Singer "Space-Saver" Unit, the setup consists of a specially shaped table (top and all edges bound with 'Formica') mounted on a sturdy, heavy gauge steel stand.

Because all four of the legs supporting the stand are located to the right of the treadle, work handling equipment may be placed closer than usual to the sewing machine.

The surface of the table is unmarred by through-the-table fastening devices. Stand and driving equipment are secured by steel anchors that are locked in the 1 3/4" thick wood tabling. Sealed in the front edge of the table, which slants back twenty degrees from the operator, is 36-inch measuring rule. Tables are available in either light wood grain or green linen Formica finish.

Yarn Suppliers

Richard Condon Joins Spinnerin Yarn Company

SOUTH HACKENSACK, N. J. — Richard Condon has joined Spinnerin Yarn Co. as a salesman in the machine knitting yarn division.

He was with Huggins-Cleveland Co., Inc.

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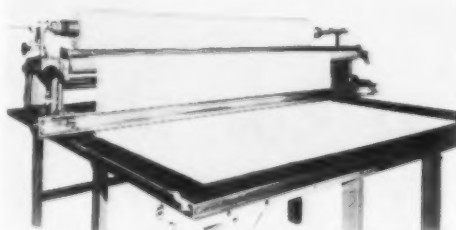
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(Continued from Page 5)

from an opposed cone variable speed transmission driving the take-up rolls. An interesting, though by no means novel, feature of the machine is continuous heating of the oil sump to maintain the knitting elements in gauge regardless of the fluctuations in the ambient temperature. A small low power immersion heater fitted in the sump keeps the oil at uniform temperature even during weekend shutdowns.

The let-off has been redesigned to meet the requirements of large diameter beams. The previously used rubber band signalling the linear speed of the warp sheet has been replaced with felt-covered rollers riding on the surface of the warp. The yarn speed signals are relayed mechanically to a clawer device which remains inactive all the time there is no deviation from the preset speed. Once the beam starts delivering too little or too much yarn, the clawer becomes operative and adjusts the variable speed drive of the beam until it reverts to the preset speed.

The variable speed drive consists of the well-known opposed cone and ring arrangement. Runners are set by inserting suitable change gears in the let off drive.

Raschel Machine

Only Mayer exhibited a Raschel machine. It was a standard, 24 guide bar model, knitting wide lace bands with a deep scallop and intricate ground ornamentation. It ran at 265 courses per minute which, considering the 240 course pattern repeat, was quite a performance.

Among the various improvements incorporated on the machine, perhaps the most significant was the use of single contour cams in place of conventional cam/counter cam system. The camshaft is balanced to lessen vibration. At such relatively low speeds, however, balancing of the camshaft will scarcely contribute to improvement in machine performance.

Much to the disappointment of many warp knitters, Kidde did not exhibit a single unit. Its newly developed equipment, such as the 2-needle bar model for thermal cloth, multi-bar sampling machines, carpet and hispeed tulle knitters were just shown or described on leaflets, a poor substitute for the real thing.

Warpers

Two warpers were exhibited. One by Cocker, type SB; the other by Mayer, type SG 58. The Cocker warper is capable of accommodating a single 42 inch or 21 inch spool at a maximum flange diameter of 32 inch. The most interesting elements of this warper are:

1. Constant speed control mechanism.
2. Braking systems for all rotating parts.
3. Presser roll assembly.
4. Beam loading and doffing arrangement.

The constant winding speed is maintained by a differential arrangement comparing the preset speed with the warp velocity signalled to it from the presser roll. As soon as these two values diverge, the differential takes a corrective action and restores the status quo by adjusting the output of main driving motor. This is accomplished by a small servo motor controlled from the

(Continued on Next Page)

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differential and operating a rheostat which in turn governs the RPM of the main motor. This type of control forms a departure from the conventional Tak-generator system. The speed variance is only ± 1 per cent.

The presser, guide roll and beam drive are fitted with powerful electromagnetic brakes. All three are individually adjustable through rheostats for optimum braking performance. It is essential to brake all revolving warper parts in order to maintain the tension and avoid scuffing or filamentation of the yarn. The heavier the spool or faster the warping speed, the greater braking effort necessary to stop all rotating parts fast enough to wind not more than about six feet of warp. The brakes could be adjusted to stop even a heavy beam almost instantaneously, but the strain of such abrupt stoppage would be liable to damage the warper drive or tear it off its mountings.

The presser roll is so mounted as to move in a horizontal plane and ensure uniform density of yarn build-up. The pressure the roll exerts on the spool may be adjusted within very fine limits. A roll pressure dial is provided on the control panel.

Loading and doffing of the spool is carried out with the aid of an electric motor operating the loading pan by means of chains, sprockets and levers.

Warping speeds of up to 1,000 yards per minute are possible providing the yarn can withstand it. Driving the warper spindle at high speeds is relatively simple. The problem is to

maintain adequate control over the yarn and avoid damaging of the filament bundle.

The warper was equipped with shockless static eliminator bars which could be touched by hand without unpleasant consequences.

The Mayer warper, type SG 58 shown at the Mayer stand was almost identical to one introduced here last year. This is a 42 inch capacity unit featured by simplicity and easy access to all parts. It has lever controls working in slots located on the side frames. A movable push-button station is suspended from a long arm above the reed. There is a simple hydraulic system for beam handling.

Shown on the Kidde stand was a photograph of what is easily the largest warper in the world. It accommodates a 105 inch wide Raschel spool. The warper was built on order from a power net knitter. The spool winds 2,880 ends of elastic yarn. Despite the tremendous size of the spool, the warping speed is controlled to within $\pm \frac{1}{2}$ per cent.

Powerful electric brakes are fitted on the presser roll, winding and measuring rolls. Constructional features of the warper follow those of the Kidde Model 149 unit.

Dyes & Chemicals

Phoenix Dye Works Names William Susen

Phoenix Dye Works has elected William H. Susen chairman of the board to fill the vacancy left by the death last year of Theodore A. Susen.

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MILL EQUIPMENT, MACHINERY FOR SALE

FOR SALE

- 2 — Jacquard LH, 6 cut
- 2 — Phila. Jac., LH, 7 cut
- 1 — Phila. Jac. LA, 10 cut
- 1 — Phila. Jac. AI, 32", 32 feed, 14 cut
- 3 — Phila. Jac. TAI, 12-15 cut, strippers
- 1 — S & W MFRC, 18 cut
- 2 — Wildman, PB 2, 1—19", 9 cut; 1—20", 8 cut
- 2 — Brinton, 24", 2 position wheel, 1380 needle
- 37 — Scott & Williams, Wildman, etc., ribbers
- 3 — Phila. Jac. TA, 30", 11½, 12, 14 cut, strippers, all-folds

Write, Wire, or Phone

SPEIZMAN KNITTING MACHINE CORP.
350 Fifth Ave., New York 1, N. Y. PE 6-0930-1

WANTED

10 cut flat machines, fully automatic

BOX 220A

BEST BUYS

- 3—Supreme Philip Interlock 14½ cut, 19 cut, 30" & 15½ cut, 33"
- 4—Phila. Jacquard AI, 16, 16½, 17 cut, 32", 32 feed
- 2—S & W MFRC, 30", 32 feed, 18 and 18½ Cut
- 4—Phila. Jacq. LH Mach., 6 & 7 Cut, 30", 6 Feed
- 1—Phila. Jacquard LA Mach, 10 Cut, 30", 12 Feed, 3 color strippers
- 1—Phila. Jacquard TJ, 8 cut, 12 feed, like new
- 3—Phila. Jacq. TJ Mach., 7, 8 & 8½ Cut, 28", 6 Feed
- 1—O.G. Interlock Mach., 30", 14 Cut, 12 Feed
- 2—Phila. Jacq. TJ, 16" 7 Cut, 4 Feed, 4 Col Strip
- 4—Phila. Jacquard TAI Machs., 12, 13, 13½, 16½ Cut, 30", 12 Feed
- 4—Phila. Jacquard TA Mach., 10, 11, 12, 13 Cut, 30", 12 Feed
- 1—Philadelphia Jacquard MLW, 28", 11 Cut, 24 Feed, Wheels and Jacquards
- 1—O. G. Multi-Feed Jersey, 1x1 Rib, 8 Cut, 36 Feed, 32"
- 3—Leighton Machs., 22", 26", 28", 10 Cut, 6 Feed
- 2—Wildman PB2 Mach., 17", 18", 8 Cut
- 6—Wildman Interlock Mach., 10 Cut, 19", 21", 22", 20 Feed
- 7—Universal Supramats, 4 cut, 62", new style
- 1—Universal Supramat, 12 Cut, 62", like new.
- 1—Tricoma Double Lock 12 cut
- 1—Dubied BAN Mach., 56", 12 Cut, Jacquards Front & Back
- 3—Dubied, Single & Double Lock, 22", 7 & 12 Cut, 22", 44", & 47", 4 Bar
- 2—Lamb Doublehead Border Machines, 6 & 7 Cut
- 6—Huebsch & Cissel Tumbler Dryers
- 6—Steam Tables and Pressing Machines, 30x60, 24x48, 24x60
- 1—McCreary Brushing Machine, 72", New Style
- 4—Reiner Full Fashion machines, 21 gauge, like new.
- 1—Rimaldi machine
- 2—Stafford & Holt machines, 30", 32", 6 & 7 Cut, 6 & 12 Feed.

Joseph Kopelowitz, Inc.

APPRAISALS — LIQUIDATIONS — FINANCING
600 Broadway, Brooklyn 6, N. Y. EVergreen 7-1145

FOR SALE

Established knitting mill fully equipped, operating, complete with winding, sewing and steaming machines. Manufacture ladies', men's, boys' and infants' knitted outerwear. Capable 500 dozen weekly. Including inventory yarns, etc. Two floors approximately 10,000 sq. ft. Metropolitan area.

BOX 213**FOR SALE**

Jacquard T.A.I. 10 gauge in excellent condition. Can be seen working. To exchange for the same make or T.A. in 14 gauge. Must also be in excellent condition.

SYLVAN KNITWEAR MILL

130 Palmetto St., Brooklyn, New York

HY 1-1000

FOR SALE

4—Queens, 8 gauge, double jack, Links & Links knitting machines. Now operating.
(1-72", 1-80", 1-84", 1-88")

IN NEW JERSEY CALL**TEmple 5-0367 before 4 PM****PRICED FOR IMMEDIATE SALE**

One brand-new Henrici 36x54" 2-pocket special-built stainless steel Knitwear Washing Machine (for washing, scouring, and "fulling" operations).

This is a brand new machine which we had on display at a recent Exhibit in Atlantic City and a size we normally carry in stock. However, extremely limited warehouse facilities in our plant at this time makes temporary storage of this machine a problem and we are offering it specially-priced and ready for immediate delivery.

This Knitwear Washer has complete motor and reversing control equipment for 220/3/60 current, infinitely variable speed drive, dial type thermometer and water inlet valves. It is the most popular size of our Knitwear Washer line. Standard price f.o.b. our factory is \$4,805.00. Special price this machine only: 10% off and we will prepay freight to any point in eastern U. S. A.

HENRICI LAUNDRY MACHINERY CO.**Henrici Street, Mattapan, Boston 26, Mass.****FOR SALE**

Trim-Master, Sr. Almost like new.

Fine and coarse cutting head.

Grosser, Semi-Automatic 6 gg Links & Links machine equipped with Grosser cones, without motor.

BINGHAMTON KNITTING CO., INC.**BOX 105, Binghamton 31, N. Y. or RAYmond 2-6941****FOR SALE**

2 — 10 cut TA

2 — 14 cut TAI

4 — 13 cut TAI

2 — 16½ cut TAI

In good condition. Can be seen in operation. Will be sold separately.

CRAFT KNITTING MILLS

119 Ingraham St., Brooklyn 37, N. Y.

HY 7-2660

Dealer's commission protected if your bring the customer.

WANTED

60 Spindle Foster No. 102 or

56 Spindle Lessona No. 60 Winding Machine

BOX 222**FOR SALE**

2 — LH, 8 cut, 30" set on Jacquard

1 — Card punch machine, 8 cut

3 — Flat machines; 84", 7 cut and 44", 6 cut

1 — Brushing machine, 60"

BOX 221**WANTED**

8" Brinton TWR machines, cylinder and dial equipped with trick wheel pattern drums.

BOX 223**FOR SALE**

2—Jacquard PA, 7 cut, 30", 6 feed, electric stop-motions, geared motor drives set on 3½ cut bulky patterns. Reasonable.

BOX 220G**POSITIONS WANTED****PRODUCTION FOREMAN AVAILABLE**

Full-fashioned or cut and sewn ladies' sweaters. Can take charge of looping, sewing and finishing departments. Familiar with all yarns and styles. Able to relocate.

Box 220B

**FOR THE BEST RESULTS
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LIQUIDATION SALE

**of all MACHINERY & EQUIPMENT of
MIDLAND MANUFACTURING CO.
Located at Midland, North Carolina**

- | | |
|-------------------------------------------------------------------|-----------------------------------------------------------------|
| 3—Philadelphia Jacquard LH, 7 cut, 3 color strippers, on Jacquard | 2—Morrow, Model A-3DW-3 |
| 2—Universal Supramat SFV, 63, 4 cut | 1—Morrow, Model A-3DW-1 |
| 2—Lamb 8 cut, Border Machine | 1—Union Special Single Needle Machine |
| 1—Ainslie 8 cut, Border Machine | 1—Lewis, Model 200-1 |
| 2—Dubied, Model VD, 40, 8 cut | 1—Lewis, Model 150-2 |
| 1—Philadelphia Jacquard 70 lever punching machine | 1—Industrial Laundry Washing Machine 36" x 36", stainless steel |
| 1—Leesonia 6 spindle back winder | 1—Fletcher Extractor, 30" |
| 1—Singer, Model 175-38, Button Hole Machine | 2—Heusch Tumbler Dryers |
| 1—Singer, Model 71-101 | 1—60" Calendar |
| 1—Singer, Model 241-12 | 5—Eastman and Maimin Cloth Cutting Knives |
| 1—Singer, Model 251-6 | 20—96" Fluorescent Fixtures, complete |
| 1—Singer, Model 71-52 | 20—48" Fluorescent Fixtures, complete |
| 1—Singer, Model 31-19 | 1—Westinghouse Air Compressor, 5 H.P. |
| 2—Morrow, Model M-3DW-4 | 1—Small Machine Shop with tools, parts, etc. |
| 2—Morrow, Model 15CA, Crochet Machines | |

Sale May 22 to June 2

Machines sold "as is"

For those in the New York area, photographs of machines, descriptions, fabrics, etc., are available at our New York office.

SPIEZMAN KNITTING MACHINE CORP.

Empire State Building, Suite 4923, New York 1

PE 6-0451

508-14 West 5th Street, Charlotte 1, N. C.

ED 4-5546

LIQUIDATION SALE

24 Gauge Complete Full Fashioned Plant

Also 45 Hand Machines. Will Sell as one unit or separately

Formerly GOLDEN FLEECE KNITWEAR CO. & WALTER FRAMER

Located at D & Ontario Streets, Phila., Pa.

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671 Bushwick Avenue, Brooklyn 21, New York

GLenmore 2-4936

Telephone at Mill listed under Ben Wachsman & Co. If no answer call New York number.

Mr. Wachsman will be at mill June 1 & 2 or by appointment.

KNITTING MACHINES

- 2—24 Ga. F.F. Textile Machines, rebuilt by Bearing products. Body machines 10 Sect., 31½" each section
- 1—24 Ga. F.F. Textile machine, rebuilt by Bearing products. Sleeve Machine 14 sect., 16" each section
- 1—Supreme V. Bed F.A., 10 cut, 48", 4 bar with motor drive
- 1—C & F with Supreme attachment F.A., 8 cut, 26", 4 bar motor drive
- 1—Robac F.A. 4 bar, 10 cut, 44", motor drive
- 1—Leighton, 10 cut, 17", 2 feed, 3 needle rack
- 1—S & H Circular Border machine, 18 needle, 2"
- 1—C & F.F.A., 5 cut, 26", 3 bar, with motor drive
- 2—3 cut, full automatic flat machines; one 26", one 31".

LOOPING MACHINES

- 2—3 point, Setco
- 1—4 point, Setco
- 13—5 point, Setco
- 6—5 point, Model "P"
- 1—6 point, Setco
- 1—7 point, Setco
- 1—8 point, Setco
- 1—10 point, Setco
- 1—10 point, Model "P" Looper
- 2—12 point, Setco
- 8—12 point, Model "P" Loopers
- 4—14 point, Setco
- 3—14 point, Model "P" Loopers
- 7—15 point, Model "P" Loopers
- 2—5 point, single thread, Hep-worth
- 2—12 point, single thread, Hep-worth

V-BED HAND KNITTING MACHINES

- 2—4½ cut, 18", S&D
- 3—5 cut, 2—24" and 1—27" Ainslie
- 5—5 cut, Grosser V-Bed Hand machine, 3—20", 1—22", 1—24"
- 9—5 cut Diamond, 28", 2 bar each
- 10—10 cut, Diamond, 1—20", 1—24", 1—27", 5—28", 2—36", 2 bar each
- 4—2½ gauge, 20", Grosser, 2 bar
- 4—2½ cut, 24", Grosser, 2 bar
- 4—2½" cut, 26", Grosser, 2 bar

SEWING MACHINES

- 7—Union Special, style 41300xL
- 1—11900, Union Special Diff.
- 3—400W-30, Singer
- 2—400W-102, Singer
- 1—112W-115, Singer
- 1—A-3DW-3, Mero
- 4—60 BD and JOW Mero Mach.

OFFICE EQUIPMENT

- 1—Remington Rand, Adding machine
- 1—Check Master (Safe Guard)
- 1—Payroll master Tax Service
- 1—Underwood typewriter and stand
- 1—¾ Ton Air Conditioner
- 1—Air Fresh Office Fan
- 1—Arvin Office Heater
- 2—Tower Safe and file combination
- 2—4 Draw Metal File cabinet
- 5—Office Desk and Chairs
- 1—Metal Coat Rack
- 1—Metal Sample Cabinet
- 1—Victor Adding machine
- 1—Glass top magazine table
- 1—Tork Clock self starting

MISCELLANEOUS MACHINES

- 1—Bonis Super Never stop model
- 1—5" Cutting machine
- 1—Slitter
- 1—S2, Reese, button hole Mach.

- 1—S1, Reese, Button Hole machine
- 1—Dearborn Blind stitch
- 2—Chandler Button Sewers
- 4—30x60 Hoffman Presses
- 2—30x60 Steam table
- 1—Tailor Press machine
- 1—Williams Laundry Washer
- 1—Williams Extractor
- 1—Heusch Dryer
- 1—Hoffman Dryer
- 1—5 Lb. Toledo Scale, Lbs per Doz.
- 1—2 Lb. Ohaus Scale, Lbs per Doz.
- 2—Fairbanks Platform Scales
- 3—6 spindle each, Universal Back Winders L. Drive
- 1—18 needle, 3 gauge, Circular Border Machine
- 1—2 HP, Keystone Compressor
- 1—3 HP, Westinghouse Compressor
- 1—5 HP, Keystone Compressor
- 33—Individual Looping tables & mtrs
- 10—card tables
- 15—Metal Work tables
- 70—Chairs
- 68—Work beams, metal and Fibre
- 7—Fibre trucks
- 27—table lights
- 166—Fluorescent lights
- 1—Double End Grindstone
- 2—Vises
- 2—hand trucks
- 1—strapping machine
- 2—tape dispensers
- 30—sections of shelving

YARNS WANTED, FOR SALE**WE BUY AND SELL**

Worsted — Synthetics — Blends

AT BEST PRICES!

BEDFORD YARN CO.
MAin 2-1340
Brooklyn, N. Y.
79 Clifton Place

Call us if you need short lots of yarn to fill special orders.

We have in stock, at all times, worsted, zephyr & Orlon, in all colors and sizes, on cones, FOR IMMEDIATE DELIVERY
ENTIRE YARN INVENTORIES PURCHASED FOR CASH

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**CENTURY
YARN CO.**

Brooklyn 6, N. Y.
EVERgreen 8-8277

WILSON YARN CORP.

141 Wilson Ave., Brooklyn 37, N. Y. GL 6-9686 H. BERMAN
WE PAY We Buy & Sell We carry in stock
TOP PRICES FOR **WORSTED & SYNTHETIC** all colors and
SURPLUS YARN **YARNS** all sizes for the
knitting trade!

WANTED—ORLON YARN

Large lots of natural and colors at closeout prices
—18/1 and 20/1 cotton count or equivalent
sizes. Submit samples, stock list and best prices.

BOX 214**FOR SALE****ELASTIC YARN FOR KNITTING**

• All Sizes and Colors

BEDFORD YARN CO.
79 Clifton Place
Brooklyn, N. Y.
MAin 2-1340

CONTRACT WORK, CONTRACTORS WANTED**SUBSTANTIAL JOBBER**

seeks contractor to knit and sew a good quality
skirt and dressmaker sweaters to match. Only
a top quality mill with skirt and dressmaker
experience can be considered.

BOX 229**WORK WANTED**

on 8 and 9 gauge LH Jacquard machines.
Also, 18½ - 20 gauge Scott and Williams
and 6 cut Ordnance Gauge machines.
On men's shirts and sweaters.

BOX 228**CONTRACT WORK WANTED**

Cutting, pressing and complete finishing work.

BOX 225**CONTRACTORS WANTED**

Contractors to do knitting only on body size

10 cut TA machines. Steady work.

Large quantities.

BOX 227**CONTRACTORS WANTED**

with 8 gauge links and links circular machines, to knit shirt fronts.

Large volume, steady orders.

Call **MR. BERNARD COHEN**
UNion 5-2600 in New Jersey

CONTRACTOR AVAILABLE

On 7-cut Circular links.

Complete garments or knitting only.

Call (N.Y.C.) GLenmore 6-7858

HELP WANTED**INDUSTRIAL ENGINEER WANTED**

Strong background in knitting and looping industry. Must
qualify to eventually head standards and methods depart-
ment. Factory located in Massachusetts. Excellent oppor-
tunity for a qualified "pro" with nationally recognized
organization. Must be willing to relocate.

ADDRESS REPLIES BOX 200F**KNITTER-MECHANIC WANTED**

Experienced on Supreme, ROF and automatic machines.

Top salary for top man. New York area.

Send complete resume with first letter. All replies confidential.

BOX 77**EXPERIENCED MECHANIC WANTED**

Must be familiar with all types of knitting machines.

BOX 226REPRESENTATIVES, LINES WANTED**SALES AGENT WANTED**

Ladies' swimwear manufacturer wants an experienced
agent to handle sales to the wholesale and large
chain store trade. Will be selling 1962 line.

BOX 220F

SALESMAN WANTED

to sell discount houses and chain. Must be well established and capable of generating large volume in women's sweaters.

BOX 220

CLOSE-OUTS WANTED**CLOSE-OUTS WANTED**

CASH PAID for surplus stocks of Sweaters and Bathing Suits.

BERNETTE TEXTILE COMPANY

101 W. 31 St., New York City

BRyant 9-5526-7

JERSEY FABRICS, CLOSEOUTS WANTED

Cotton, Orlon, Acrilan, solids & fancies. Fleeces, Metallics. Knitted collars, woven piece goods & remnants. **We pay cash.**

CHARMKNIT CORP.

82 Franklin St., New York City

WALKer 5-6828

REAL ESTATE**FOR SALE OR RENT**

One story building, Brooklyn, Brownsville section

8000 sq. ft.; oil heat, fully sprinkled, air conditioned offices, ample power. Presently knitting mill. Occupancy about December 1st. For further information, call Mr. M.

HY 5-4949

TRADE WANTS

RATES: one insertion—35 cents per word. Words set completely in capitals — 40 cents per word. Box numbers count as two words. Minimum cost of advertisement—\$5.50. Minimum cost of Positions Wanted advertisements — \$5.00. Trade Wants for Monday's paper must be in by preceding Wednesday, 2 P.M. Please enclose payment with your order.

Warp knit trims. Save money on large quantity. New process cut costs. Send sample for quote. Box 224

Contract knitting wanted on 16 cut Morat machines. Box 220C

Sales agent wanted for the latest type knitted fabrics. Box 220D

CONTRACT WORK WANTED. Knitting, trimming and finishing on 5 cut fully automatic flat machines. Box 220E

Contract work wanted for better knitted sportswear. Box 225A

Production manager available. Familiar with all types of yarn. Willing to relocate. Box 225B

SUBSCRIPTION ORDER FORM

KNITTED OUTERWEAR TIMES

386 Park Ave. South, New York 16, N. Y.

Please enter our subscription to the Knitted Outerwear Times for one year. Check is enclosed. Domestic — \$10.00 per year; Canada-Foreign — \$15.00 per year.

Name.....

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BEST RESULTS
AND FAST ACTION**

**— WHEN YOU
— WANT TO BUY,
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*Yarns, Knitting Machinery
Mill Equipment, Supplies*

**— NEED
— CONTRACTORS?
— WANT A JOB
— OR NEED
— ADDITIONAL HELP?**

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Or Call MUrray Hill 3-7520**

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Gentlemen:

Insert the ad written below in issues.
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☐ 2" — \$11.00
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**Please Enclose Payment With Order.
ADVERTISEMENT**

☐ Check here if you want a confidential box number (replies sent to you as we receive them).

Name.....

Address.....

(Use separate sheet if necessary. Attach this order blank.)

**a word to the wise
is sufficient...**

Knitted Outerwear Times

the official publication of the
national knitted outerwear association
386 park avenue south, new york 16, new york
murray hill 3-7520

sweaters • swim suits • infantwear • knit fabrics • polo shirts • gloves • headwear

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Stores Urged To Extend Season

Retailers should hold off clearances of women's swimwear at least until August 1, the ready-to-wear group of the National Retail Merchants Association suggests.

Charles Himeloch, vice president of Himeloch's, Detroit, and chairman of the group, said, "The National Knitted Outerwear Association has long been urging retailers to prolong the season—in the case of swimwear, at least until August 1. It's our feeling that clearances shouldn't be until August 1st, but there may be local situations which counsel even later timing. But at least these should be intelligently scheduled and, of course, observed," Mr. Himeloch added. "From the customer's point of view, let no one say that for once she'd be able to buy the size and color and style she wants when she wants it—the buys closer to her need, remember—then has generally been the case in the past."

Knitwear Firms To Meet Feb. 15 In Charlotte, N.C.

Members of the National Knitted Outerwear Association in the South will meet 4 P.M. Wednesday, February 15 at the

Barringer Hotel, Charlotte, N. C., it was announced by Sidney S. Korzenik, executive director and counsel.

It will be an informal session and devoted to a discussion of the views and needs of the local members and recent activities of the Association. NKOA president James F. Niehls will attend.

In the evening, at a dinner sponsored by the NKOA and the Piedmont chapter, American Association of Textile Technicians, Richard C. Reich, executive vice president of the Association, will give a special address on the recent developments in knit goods.

Retailers To Meet Feb. 15 Same As Other Trade Shows

Two days of business surveys by the National Merchants Association will be held for the first half of the last year.

J. Gordon Dakins, National executive vice president and treasurer, disclosed that 30 percent of the respondents feel sales will be ahead, 36 percent feel they will be even and the balance, 34 percent, feel they will fall below last year's.

Thirty-four percent of the respondents believe sportswear will gain the most in 1961. Twenty percent listed junior apparel, 17 percent dresses, 11 percent men's wear and seven percent coats and suits.

Sweater Shipments Down

WASHINGTON, D. C.—Average weekly shipments of men's sweaters in December, 1960, amounted to 25,000 dozen, down 40 percent from shipments in the comparable period in 1959, the Bureau of Census reported.

Korzenik Presents Import Analysis To Pastore Committee Hearings

WASHINGTON, D. C.—The mounting threat of foreign imports in the textile and apparel field was the chief subject of presentations made by various affected industries at the hearing of the Pastore Committee when it reconvened on Monday and Tuesday, February 6 and 7 for a further consideration of the problems of this area of the industry.

Sidney S. Korzenik, executive director and counsel of the National Knitted Outerwear Association, presented the committee with an analysis of the situation of knit goods in the market.

He also presented a general statement of the knit apparel industry and the committee's part in the concern for the textile industry to include a study of the problems of the apparel industry which could be the result of the consumption of foreign goods.

The Pastore Committee is a sub-committee of the Senate Committee on Commerce and Labor.

Initially constituted in 1958 to make a study of the troubles in the textile industry. In the report it published as a result of its first hearings it stressed the dangers of foreign imports, took a sympathetic attitude toward the possibility of quantitative restrictions, recommended the establishment of an inter-agency committee on textiles and arranged for certain special research studies to be prosecuted on this subject. The inter-agency committee that was later established in consequence of the first Pastore report reached the conclusions that were opposed to any action with respect to foreign competition outside of the avenues of relief, limited as they are, provided under the Reciprocity Trade Agreement Act. The inter-agency committee

report was found highly disappointing in the textile industry.

The reconvening of the Pastore Committee is intended, therefore, to bring its study on the textile industry up to date and to make new recommendations.

Textile and apparel interests as well as labor unions presented their viewpoints to the committee which Senator Pastore, Democrat of Rhode Island, heads. Attention was primarily focused on the injury suffered as a result of foreign imports, particularly from Japan.

Increasing imports of knitted outerwear have come to occupy a substantial part of the domestic market and have been hurtful to the knitted outerwear industry and to related segments of the economy," Mr. Korzenik said.

"As the knitted outerwear case shows, the competitive advantage rests with the countries where substandard wage rates prevail, notably Japan.

"In consequence of this advantage, low-priced imports from low-wage countries proved detrimental not only to the United States industry, but have displaced other Western allies from their position in the American market.

"Export quotas announced by Japan have been illusory, misleading and unless bilaterally negotiated and agreed

(Continued on Page 37)

TRUSTED!

**for the facts that may not
be self-evident... call or write...**

Knitted Outerwear Times

386 PARK AVENUE SOUTH • NEW YORK 16, N. Y.

MURRAY HILL 3-7520



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RAW
FIBER
TO
FINISHED
YARN**



**WOONSOCKET
SPINNING CO.**

When you buy from Woonsocket you are buying the best! Whether it be cashmere, camels hair, angora, fur blends, mohair, lambs wool or other specialty yarn, Woonsocket begins with the world's finest fibers. Woonsocket processes them in its own mills, under highly scientific control until the yarn is delivered promptly to your factory. Thus you are assured of an adaptable resource, able to meet the constantly changing demands of men's and women's fashions.

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